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## ESSAYS, MONOGRAPHS, AND CASES.

### *A Paper on Diphtheria, with an Attempt to Portray its History in the United States.* By JAMES WYNNE, M.D.

(Continued from page 110, February No.)

*Symptoms.*—Diphtheria is frequently attended with very slight constitutional disturbance, at the commencement of the attack, even where the disease is destined to a fatal tetmination. The patient is often so little affected, that, with the exception of some slight difficulty in the act of deglutition, he exhibits no evidences of disease, and it is with difficulty that the parents can be brought to consider this symptom as one of much importance, or the child in very serious danger.

After a short interval, however, one of the tonsils, seldom both, becomes specked with a yellowish-white deposit, which, when seen at this early stage, presents the appearance of small whitish stars in the midst of a ground of what appears to be a transparent layer of mucus, but which really is the true diphtherial membrane, through which the body of the tonsil, often of an increased redness, is distinctly seen. These spots, small at first, rapidly enlarge, the membrane loses its trans-

parency, and if not speedily arrested, spreads over the soft parts of the palate, both tonsils, the uvula, and involves the larynx, and sometimes the trachea and bronchial tubes.

Usually, even in slight cases, the local symptoms are preceded by some constitutional disturbance. There is a feeling of malaise, pain in the head, often extending to the neck, lassitude, and more or less fever. In the mild form the tongue presents a thick creamy coat, through which a few papillæ are visible; the uvula, the velum-palati, and pharynx are of a bright red color, and the tonsils swollen, and specked with the filmy deposit already described, which is generally closely adherent to the mucous membrane, although in some cases it is easily removed in its early stages by the application of the sponge probang, which is often coated with the new-formed deposits.

This membranous exudation may extend over the whole palate, but in mild cases rarely does; nor is its color much deepened, or the odor emitted offensive or fœtid. The submaxillary glands are slightly swollen, but do not attain the size which they acquire in the severer forms of the disease. Under favorable circumstances, or the application of judicious treatment, its progress is here arrested. The membrane ceases to spread, and slowly becomes detached from its connections; the mucous membrane loses its red color; the glandular swellings subside; the pulse diminishes in frequency, and the patient becomes decidedly convalescent.

The disease, however, does not always present itself in this form, but is ushered in by rigors and often vomiting, under whose influence the patient becomes so prostrated that it soon becomes obvious that the system is oppressed by a powerful poison. This condition is characterized by a high fever, a pungent skin, a rapid and feeble pulse, great difficulty in deglutition, hurried respiration, flushed countenance, and congested lips; the tongue becomes loaded by a yellow or dirty brown coat; the soft palate and pharynx assume a deep erysipelatous redness; the tonsils become greatly swollen, and the ash-colored membrane, nearly continuous and spread over one or both tonsils, extends to the uvula and the posterior walls of the pharynx. As the disease advances, these symptoms increase in severity; the breathing becomes more hurried and stertorous; the swallowing, which at first was but moderately impeded, becomes so difficult and painful, that the child is with great difficulty induced to take either food or medicine; the saliva flows from the mouth, and often a foul and acrid discharge from the nares. Should the little patient be induced to swallow, food or drink will be violently ejected, and a paroxysm of great intensity,

in which the child will gasp for breath, and with great difficulty recover itself, will ensue.

The case has now reached a point which portends the most unfavorable results. The false membrane has seized upon every visible part of palate and pharynx; the discharge of sanies mixed with blood, which issues from the mouth and nose, has become exceedingly offensive; the glands of the neck become enlarged and tender; the voice hoarse and indistinct; the pulse more rapid and feeble; and the poor patient, restless and embarrassed for want of breath, tosses about or lies on his back in a semi-comatose state; in most cases the medical attendant is apprised by a croupy respiration, when the membrane has invaded the larynx and trachea, at which time symptoms of asphyxia present themselves; the countenance becomes livid, the skin cold, the pulse feeble or gone, and the patient, either distressed for want of breath, anxiously awaits the moment when death shall relieve him of his sufferings, or rapidly sinks into an asthenic or comatose condition.

The croupal anxiety and suffocation are inimitably painted by Aretæus in the following passage:

"Tussis spirandique difficultas enascitur, et modus mortis quàm miserrimus accedit. Pallida his seu livida facies, tristior autem cùm tonsillæ comprimuntur. * * * Cumque decumbant, surgant, aut sedeant, decubitum non ferentes. Quod si sedent, quiete carentes, iterum decumbere coguntur. Plerumque recti stantes obambulant nam quiescere nequeunt. Inspirato magna est—expiratio verò parva. Raucitas adest vocisque defectio. Hæc signa in pejus ruunt, cum subito in terram collapsis anima deficit."

The patient is usually enabled to be up for several days after the invasion of the disease, but is finally confined to bed in grave cases by extreme prostration. There is often, indeed, great danger in assuming the erect position under these circumstances, as is evidenced in case of Dr. Cooke. Death by syncope in the advanced stage of the disease is not an unfrequent result upon any extraordinary exertion, and an aggravation of the grave symptoms is quite common.

These descriptions exhibit the mildest and most obstinate forms of the disease, between which it may present itself in every variety of intensity; at times yielding easily to medicine; and at others, although apparently attacking the patient with less force, proceeding slowly but surely to a fatal termination. The prognosis should therefore be always guarded, because it is not always possible to predict the effect of remedial agents, or the hidden force with which it may at any period develop itself.

*Duration.*—When diphtheria runs its course without complications, it seldom proceeds beyond the seventh, eighth, or ninth day. The result of M. Bretonneau's extended experience is, that its usual period of continuance is six days. When, however, it is complicated with croup, or scarlatina, or measles, its duration is much more uncertain; M. Bourgeois has known it, when associated with other diseases, to continue eighteen days. Dr. Ranking says that its duration is very variable; he has known it to prove fatal in forty-eight hours from the first seizure, and to continue for two weeks or more, and finally to prove fatal long after all active symptoms had subsided, either from pure exhaustion or the supervention of other lesions.*

*False Membrane.*—When the mouth is examined upon the first day of the pseudo-membranous deposit, the parts destined to become the seat of the disease present the appearance of pieces of flesh, bleached by contact with boiling water; soon after there appears on the tonsils, the uvula, or the soft palate, small vesicular points of a lardaceous appearance, formed by the dissolving of the epithelium, which may readily be confounded with the minute yellow patches soon to appear. The membrane is almost invariably developed primarily upon one or the other of the tonsils, but not always, as the uvula is sometimes the original seat of the patches.†

Ordinarily, at the moment of formation, or soon after, the false membrane appears under the form of a white or a yellowish-white spot, rarely gray, quite circumscribed, a little projecting at its centre, and surrounded by a circle of lively red. Sometimes the false membrane is semi-transparent, and forms a slight pellicle, which envelops the tonsil, through which the surface of this gland is partially visible; but it soon loses this transparency and becomes of a yellowish-white color, extending itself to the subjacent parts with greater or less rapidity, according to a variety of circumstances, and especially on the kind of treatment which has been adopted.‡ After the false membrane has developed itself upon the tonsils, it usually extends to the soft palate, the uvula, and finally to the pharynx, with greater or less facility, regularly involving these different parts in the order here indicated. This is not invariably the case, for sometimes it is developed simultaneously in several distinct points, which finally converge the one into the other, and finish by forming a continuous surface. While

* Ranking on Diphtheria.

† Relation historique d'une epidemic de diphtherapathie, Gaz. Méd., 1846, p. 178.

‡ Id., loc. cit., p. 391.

it is thus enlarging its boundary, the false membrane acquires an additional thickness by the crossing of successive layers, so that it is not composed of one single fold, but of many, which present a varied appearance, dependent upon the place occupied by them: sometimes appearing like a deep ulcer, with a yellow base; at others, enveloping the uvula as a finger by a glove, and on the palate having the semblance of a deep hollow.*

The period between the formation of this membrane and its dislodgment is very variable—usually from one to six days. In the early part of the disease, after being detached, a new membrane forms in its place, and this may be habitually reproduced several times. When the membrane is cast off spontaneously about the sixth or seventh day, its place is seldom supplied by a new deposit; and about the tenth day the patient is convalescent. When the case terminates fatally, the original inflammation extends to the air-passages, and not unfrequently to the nasal cavities, which likewise become the seat of a pseudo-membrane; greatly augmenting the sufferings of the patient and the gravity of the disease, whose termination is heralded by the fœtid, sanious discharge from the nostrils, and symptoms of angina, which speedily supervene.

When the termination is hastened by the supervention of gangrene, the pseudo-membrane loses its consistency, is easily detached, changes to a grayish color, frequently mixed with bloody spots, and is coated with a sanious fluid, which flows from the mouth and nostrils, and emits a very fœtid odor. The flow of blood in these cases is sometimes considerable, and not unfrequently covers the lips and nasal cavities; in which latter the flow is often arrested by the formation of clots.

Whatever may be the time at which the false membrane becomes detached, it generally exhibits the subjacent tissues diminished in size, and of a redness more or less intense in color. This diminution in size is especially noticeable on the tonsils and uvula. The false membrane does not always occupy the same seat. MM. Rilliet and Barthez have given the relative proportion of cases in which the membrane was observed by them in various positions, as follows:

| | |
|---|---|
| Upon the tonsils alone, | 6 |
| Upon the tonsils and some part of the soft palate, | 4 |
| Upon the tonsils, the velum of the palate, and the pharynx, | 6 |
| Upon the tonsils and the pharynx, | 5 |

* Rilliet and Barthez. Maladies des Enfans, vol. i., p. 252.

*Enlargement of the Submaxillary Ganglions.*—The enlargement of the submaxillary ganglions, usually accompanied by an inflammation of the throat, is a symptom so universally present, that M. Bretonneau has seldom failed to notice its presence in any of the numerous cases that came under his own personal observation. It makes its appearance from the first to the fifth day, and is always attended with a marked aggravation of the local symptoms. The seat of the enlarged glands is usually at the angle of the lower jaw, in the neighborhood of the apophysis mastoid.

*Symptoms as Observed by Others.*—Dr. Pichenot, who noted the progress of the epidemic in the Commune of Creusery, in 1855, in his report to the Académie de Médecine at Paris, thus describes the usual progress of the disease:

"The affection begins by a sort of general malaise, yet not sufficient to hinder the child from its ordinary play. In a short time, however, a difficulty of deglutition is experienced, and an undetermined pain in the neck and head. Usually there is no appetite, the mucous membranes of the mouth and nose are dry, the tonsils augmented in volume, and the patient refers to the ears the sense of pain felt in deglutition. In a short time all these symptoms are increased in intensity; vomiting and pain in the abdomen soon follow, accompanied either with constipation or diarrhœa. The pulse is frequent, irregular, and depressed. The voice is altered, the respiration painful and croupy, and a cough follows the attempt to drink, or even to open the mouth. The tonsils press upon the folds of the soft palate, and their surface is injected with a thick grayish deposit. But it is upon the mucous membrane of the posterior portion of the throat that the "diphtheritic plaques" usually present themselves, and their grave condition here almost invariably presages grave and rapid disease, and not unfrequently a fatal termination. The pain in the head and neck now becomes augmented, the respiration more difficult, the face œdematous, and the maxillary glands tumefied, and sensitive to pressure.

Its march is very rapid. In the space of from three to five hours, the papular eminences of the throat become covered with a floculent, transparent veil, of white appearance. Generally, not more than one-half of the guttural cavity is at first invaded. The remainder of the mucous surface of the throat, the uvula, and the nasal cavities not being affected by the membrane, which soon loses its transparency, augments notably in thickness, and degenerates into the true diphtheritic membrane, of a gray or yellowish color.

The false membrane is not always continuous, and I have seen several times the tonsils, and the pharynx, in whole or in part, recovered from the membranous deposit while it was progressing upon the soft palate. The membranous fold is easily separated by traction, the use of caustics, and often by nature, when it appears circumscribed by a red circle. In all these cases it returns again very promptly, but is less thick, and is often reproduced upon a surface, which exhales a fœtid and sanious liquid. In some very rare cases, the membrane never falls, but is slowly reabsorbed. The voice becomes nasil; the mouth, which rests open, and the nostrils, exude continually an ichorish fluid, which becomes more fœtid as the disease progresses, and thickened with the exfoliated shreds of the false membrane. The head, neck, and chest often present a uniform plane, in which the swelling is considerable. Respiration and deglutition are rendered almost impossible, by the increased size of the tonsils and the invasion of the false membrane; the prostration is extreme; the patient is not able to raise his head; the pulse becomes imperceptible, the extremities cold, the intelligence almost always intact, the lips cyanosed, the eyes vitreous, and death comes to terminate the frightful spectacle.

Such are generally the symptoms when the case terminates fatally. During the first four months of the epidemic, death occurred from the second to the fourth day of the disease, and life was rarely prolonged beyond the sixth. Upon the decline of the epidemic, the progress of the disease was more tardy, and frequently extended to the tenth day."*

Dr. Fourgeaud, of Sacramento, says, "The disease begins in a very insidious manner, by a little engorgement or inflammation of the soft palate, pharynx, and one of the tonsils. At this period the patient complains but little; there is often no fever, or it is very moderate. The pain in the throat is much slighter than in the usual forms of sore throat; so slight, that the little patients go about playing as if nothing was the matter. In some exceptional cases, the fever and inflammation about the pharynx are considerable from the beginning. The characteristic signs of the invasion soon follow. They consist in small portions of white or yellowish lymph deposited on the palate, the tonsils, and the posterior part of the pharynx. The cervical and submaxillary glands become swollen, and the pain in swallowing and opening the mouth is occasioned more by the engorged state of the

* Rapport sur les Maladies qui ont Règne en France en 1855. Mémoires de l'Académie Impériale de Médecine, vol. xxi.

glands than by the internal secretion of lymph. These deposits go on increasing in size more or less rapidly, and in violent cases in a few hours the whole cavity of the throat is covered by them. Generally, one side is more affected than the other, and the glands corresponding with the parts affected are more swollen than those of the opposite side."

Dr. Blake remarks, that "the first effect produced by the poison is evidently on the nervous system. Drowsiness, prostration, or oppression is manifested by infants, or complained of by adults; and when the disease is prevailing, this desire of children to sleep at other than usual hours should awaken our suspicion. The pulse is accelerated from the first, but generally soft and typhoid; although in some cases it is for a few hours rather hard. The temperature of the skin is raised, although seldom harsh or dry; and frequently moist, or even covered with profuse perspiration. There is seldom any pain; rarely headache or backache. The tongue is usually coated, edges red, papillæ prominent. The appetite may remain good, and the digestion unimpaired. If we examine the throat, we may find, even within twelve hours after the occurrence of the first slight symptoms, the tonsils covered with a gray pultaceous exudation, which rapidly extends upward into the nostrils, and downward towards the larynx; and again, we may detect only a redness of the tonsils, and a small point of exudation, two or three days after the commencement of the disease, and at a time when the symptoms of general prostration had become alarming. Again, cases may present themselves in which the general symptoms and the anatomical lesions proceed *pari passu;* but in almost every case that I have seen, I have considered that death was the result rather of the action of the poison on the system, than from obstruction of the larynx. In from twelve to twenty-four hours after the formation of the false membrane, we generally find the cervical glands enlarged; and in severe cases, this enlargement may afford a serious obstacle to respiration and deglutition."*

Prof. Thayer, in his excellent essay, says:

"The most noticeable feature in the pathology of diphtheria—and the most important in view of the prognosis and the treatment—is that which may be called the blood-poisoning, that condition of the blood evinced by the hæmorrhage, and by the adynamic symptoms which appear at one stage or another in nearly all the cases. In ordinary cases these symptoms appear after three or four days; in those of the

* Pacific Medical and Surgical Journal, August, 1858.

greatest malignity, they are visible at the outset; in a certain proportion of cases which recover, they become more manifest during the convalescence than previously. The condition of the blood must be judged from the results, for we have not, I think, any analysis of it in diphtheria; but there is little doubt that there is more or less disintegration of the red corpuscles, and that the malignancy of the disease is in proportion to the extent of this destruction. Whether or not this constitutes all the visible changes in the circulating fluid, it is evidently rendered unfit for healthy nutrition by a putrescent poison. If the coexistence of renal disease with diphtheria, or its occurrence during the convalescence, should be established hereafter as an occasional fact, it will furnish another evidence of a peculiar blood-poisoning. Several observers have reported single cases in which the urine was found to be albuminous, while others have failed to find albumen in repeated examinations."

*Sequelæ.*—Those who recover from severe attacks of diphtheria are often feeble for months afterwards. Anæmia is especially a characteristic of convalescence; besides which, nervous affections of a peculiar kind often ensue; among these are impairment of vision, deafness, want of action in special muscles, and partial paralysis. Faure, who is quoted by Dr. Slade, in his prize essay, says, " Very remarkable disorders show themselves also within the throat, for the velum is completely paralyzed, and hangs like a flaccid, lifeless curtain, which interferes with speech and deglutition."

*Anatomical Lesions.*—The post-mortem examination usually discovers the tonsils, uvula, and pharynx draped in a dense false membrane one or two thousandth parts of an inch in thickness, of a yellow or whitish-yellow, and sometimes of a gray color. It is usually found as adherent to the pharynx and soft palate as the mucous membranes ordinarily are. The tonsils, which are rarely entirely enveloped, are covered with portions of the membrane, through the apertures in which the substance of the gland appears. The pharynx is often inclosed in a fold of this membrane, which presents the appearance of a yellow cloth; sometimes continuous, and sometimes broken; frequently tinged here and there with a gray hue, which has led to the belief that it was in a state of gangrene. This false membrane is composed of several folds, superimposed the one upon the other, and lies directly upon the mucous membrane. In its chemical characteristics it resembles false membranes of the larynx generally. The fœtid odor, which is so intolerable during the last days of the disease, is not observed in the body after death. The mucous membrane, which lies in conti-

guity with the pseudo-membrane, ordinarily preserves its usual consistency and character, and is not, as has sometimes been imagined, superseded by it. On the contrary, it is found adherent to the parts usually covered by it in a condition but little changed from its normal character, except when it has become involved in the inflammatory action developed in the contiguous soft parts. M. Bretonneau remarks: "Des ecchymoses peu étendues, ainsi qu'une légère érosion des surfaces sur lesquelles la durée du mal s'était prolongée sont le plus graves altérations de tissu."

It sometimes happens that the tonsils are found in a swollen and rough condition, with an irregular appearance, in various portions of which an ulcerated surface is exposed amid the surrounding folds or patches of false membrane; in which case, the mucous membrane will have become greatly altered, or altogether absent, allowing the false membrane to repose directly upon the muscular fibres of the ulcerated gland. The same observation is true in regard to the ulcerated surfaces upon the soft palate, the pharynx, and the larynx, and is especially so in relation to that part of the pharynx which comes into immediate connection with the œsophagus. It must be borne in mind, however, that although primary pseudo-membranous inflammation sometimes terminates in ulceration, it is far from being an ordinary occurrence; while, on the contrary, in a secondary condition it is not unfrequent.

When the termination of diphtheria is by gangrene, its seat is usually in the tonsils. When this is the case, the body of the tonsil exhibits a little cavity of variable extent, usually situated near the centre of the gland, partly filled with a greenish, sanious fluid, and partly with the remnants of the gland, converted into the same greenish-colored substance, with the fluid with which it is associated. The walls of this small cavity are injected, softened, and emit a fœtid and gangrenous odor. Much more rarely the pharynx and the soft palate are the seat of gangrene; in which case, they become soft, friable, covered with a greenish sanies, and emit the unpleasant fœtid odor peculiar to the gangrene of the tonsils.

A lesion which is regarded by M. Bretonneau as almost always present, is a tumefaction of the submaxillary ganglions, especially those situated near the angle of the inferior maxillary bone, in which position they often acquire the size of a walnut. At the early stage of the disease, they are uniform in their increase, soft to the touch, and of a light rose color; while at a later period they assume the color and consistence of the kidney.

Portions of the false membrane lining the back part of the throat are often seen divided into small patches—soft, bleached, of a light gray or greenish color, and dispersed in small fragments, from the tonsils to the pharynx. When found in this condition, they are bathed in a purulent fluid, fragile, and of so little tenacity that it is impossible to separate their folds, or even to raise them intact from the surfaces on which they are found. In cases like these, the intermediate parts are red, inflamed, and often covered with an abundant deposit of pus.

*Diagnosis.*—It is not a difficult matter generally to give a correct diagnosis in diphtheria, especially when the practitioner is cognizant of the fact that a false membrane has been or is forming. The diseases with which it is possible to confound it are angina maligna and croup. In the first of these affections, the medical man has the general symptoms of scarlatina to guide him, and especially the eruption, which is absent in diphtheria. In scarlatina, the tonsils are of a bright red, resembling the juice of the strawberry, and the membrane which covers them is simply inflammatory; while in diphtheria, the hue is deeper. The exudation in scarlatina is white, opaque, cheesy, and easily furrowed; while in diphtheria it is yellowish, tenacious, and not easily impressed by the action of a hard body. The inflammatory action in scarlatina is observed at the beginning in all the soft parts of the throat; while in diphtheria it almost invariably shows itself at the commencement upon the tonsils. As the disease progresses, diphtheria manifests a tendency to invade the air-passages, which is not one of the characteristics of scarlatina.

The main distinction between croup and diphtheria is to be found in the part affected. In croup, the trachea is primarily the seat of diseased action; in diphtheria, it is only reached after the disease has made considerable progress. In croup, the earliest symptom is stridulous breathing; while in diphtheria, the primary symptoms are chiefly observed in the organs of deglutition. In croup, the false membrane on the tonsils is not present; in diphtheria, it is an invariable symptom.

*Complications.*—Diphtheria may manifest a disposition to the formation of a false membrane in other parts than those primarily affected, as the skin, the mucous membranes of the nose, the ears, the lungs, and the anus; or it may prevail coincident with other affections, as influenza, bronchitis, measles, scarlatina, erysipelas; or it may be affected by a particular epidemic condition, in which it be-

comes complicated with hæmorrhage of the nose, skin, and mucous membranes of the intestines or lungs, or a typhoid type of disease.

*Prognosis.*—When diphtheria is confined to the tonsils, it usually terminates in a restoration to health; but when the false membrane extends to the nasal cavities or the larynx, especially if accompanied with grave constitutional symptoms, the patient is placed in imminent peril. Even in favorable cases, the prognosis should be given with much consideration.

*Treatment.*—The practitioner has three important indications to fulfill in the treatment of diphtheria:

1. To arrest the spread of the pseudo-membrane.

2. To alter the character of morbid action, upon which the formation of this membrane depends; and

3. To sustain the patient until these shall have been accomplished.

These necessarily involve both a local and general treatment.

The local treatment consists chiefly in the application of caustic and astringent substances, in one form or another, to the affected part. Of these, the most usual are nitrate of silver, either solid or in solution, powdered alum, chloride of lime, chloride of soda, sesquichloride of iron, and hydrochloric acid.

M. Bretonneau almost invariably employed the last of these remedies as a local application in his own practice, with the most marked success. The hydrochloric acid may be employed very nearly of the strength of the dilute acid of the shops, or considerably reduced in strength—dependent upon the severity or mildness of the attack. The best method of applying it is to moisten a small sponge attached to a probang or a camel's-hair pencil with the fluid, and while depressing the tongue with the left hand, to carry the brush forward with the right, until the fauces are reached, when those parts of the tonsils, uvula, or soft palate on which the membranous deposit appears, may be moistened with the fluid, and the instrument withdrawn. The hydrochloric acid should be applied not only to the membranous surface, but to the parts immediately surrounding it, by which means the spread of the membrane is often arrested. The application should be renewed several times a day. Care, however, must be taken not to apply it of too great strength, or too often at the onset of the disease, especially if the symptoms are not of an aggravated character; otherwise the local disease may be enhanced, by the unnecessary injury inflicted upon the surrounding parts. The symptoms often appear momentarily aggravated by the local application, which is not unfrequently followed by an attempt to dislodge the

membrane by vomiting. Should this latter result follow, the tonsils and palate will appear as if shrunken in substance, and spotted here and there with a few drops of blood upon the surface formerly occupied by the membrane.

When this does occur, the application may be renewed directly upon the surface of the gland, in order to arrest the almost invariable disposition of the membrane to renew itself upon the abraded part. As the disease progresses, and the membrane extends towards or into the pharynx, the difficulty in making local applications becomes greatly enhanced; but the practitioner should not hesitate, for fear of inflicting temporary pain, from thoroughly exploring and covering the parts affected with the solution of hydrochloric acid. For the purpose of effecting this, it is often necessary to place the head of the patient upon the knee of an assistant, and with a spatula to depress the tongue and the lower jaw firmly at the same time, by which means a view of the whole fauces may be obtained, and an opportunity afforded of making a thorough application of the local remedy.

Nitrate of silver has been warmly recommended by Trousseau, Guersant, and Valleix, in France, and was the application almost universally resorted to in England at the commencement of the epidemic in that country. The usual mode of using nitrate of silver in England was in solution. Dr. Kingsland advised a solution of 16 grains to an ounce of distilled water; and Dr. Hart, 30 grains to an ounce of distilled water. The mode of its use resembles that of the hydrochloric acid.

When the local application of nitrate of silver is made in a solid form, care should be taken that it does not slip from the holder, or break, as in such an event it might fall into the stomach. Such an accident actually happened to M. Guersant; fortunately, however, the stomach rejected it; but this might not always occur, and few medical men would be willing to take so hazardous a risk. Dr. Hauner, of Austria, considers nitrate of silver as the very best local application to the diseased surface, and advises its use in a solution of from a scruple to half a drachm, to an ounce of water.*

Subsequent experience did not confirm the good opinion entertained for nitrate of silver among the English practitioners, and many who were at first loud in its praises came to disuse it altogether. A substitute for this was found in the sesquichloride of iron, which is recommended by Dr. Ranking as being very efficacious in its effects upon

* Œsterrischische Jahrbüch für Kinderheilkunde, 1859, vol. ii.

the false membrane. He advises its use in the form of a gargle, of the strength of two drachms to eight ounces of water, to be applied to the throat by means of a brush.*

In the United States, opinion appears to be divided as to the best local application. Dr. Blake, of Sacramento, has found the greatest benefit resulting from an application of strong hydrochloric acid; a view in which he is sustained by Dr. Bynum and Dr. Thomas, both of whom have had much experience in the treatment of the disease.† Prof. Comegys, of Cincinnati, is in the habit of applying nitrate of silver, either in substance or strong solution in water. Sometimes, when the ulcerations are deep, he touches them with strong nitric acid, by means of a brush. In some cases he has employed with considerable benefit inhalations of tannic acid dissolved in sulphuric ether, applied by means of a cloth wetted with it, to the mouth.‡ The formula is:

℞.—Tannic acid, . . . . f. ʒij.
Sulph. ether, . . . . . f. ℥j. M.

Dr. Jacobi, of New York, who, as physician to the Canal Street Dispensary, which treats a large number of German children, has had a very large experience, says:

"The local treatment consists of cauterization of the membranes and surrounding parts with the solid nitrate of silver, or with strong or mild solutions of the same salt in water, (ʒss-j.: ℥j.;) of gargles, consisting of solutions of (or applying in substance) astringents, such as tannic acid, alum, sulphate of zinc, or claret wine; in gargling with, or applying, such medicinal agents as are known to have some effect on the constitution and tissue of the pseudo-membranes, as chloride of potassium, chlorates of potassa and soda, diluted or concentrated nitric or muriatic acids, liquor of sesquichloride of iron, etc. Astringents will prevent maceration, render the exudation dry and hard, and alter the consistency of the surrounding hyperæmic and œdematous tissue. It will thus prevent, sometimes, the extension of pseudo-membranes to the neighborhood of the parts already affected, and in some cases may accelerate the expulsion of the membrane as a whole. We have thus seen the best effects from tannic acid, either applied directly to the parts by means of a curved whalebone probang, or dis-

* Ranking on Diphtheria.

† Transactions of the Third Session of the Medical Society of the State of California, p. 108.

‡ Proceedings Cincinnati Academy of Medicine.

solved in water as a gargle, (℥ss-ii.: ℥ i.) Of the tinct. sesquichlor. iron we have seen no particular effect. Cauterizations with nitrate of silver we have found to be generally of very little use when applied to the pharynx. Its effect is superficial only; it will form a scurf, but will destroy nothing. Destruction of the parts cannot be effected except by forcing the caustic into and below the membrane; this can seldom be done in the pharynx of children, and for this reason cauterization is unavailing at this point, but will prove beneficial, we believe, by confining the process of exudation to its original locality. In cutaneous diphtheria cauterization may be exercised to its full extent; but as these cases are generally attended with extreme prostration, the general treatment will prove both more necessary and successful. If cauterization is to be resorted to, we generally use, and with good effect, more or less concentrated muriatic, or acetic, or nitro-muriatic acid. Where, however, cauterizations are made, great caution is necessary not to mistake afterwards the result of the caustic for pseudo-membrane. This remark is particularly applicable where nitrate of silver has been used."

Alum, chloride of lime, and calomel are sometimes recommended. When their use is deemed advisable, they may be applied by dipping a brush or the finger in the dry powder, and carrying it directly to the affected part, or blowing them through a quill.

Prof. Metcalfe advises the use of the bromide of iodine, in the form of two drops to an ounce of the mucilage, or gum-arabic, as a topical application. He also gives drachm doses of this mixture internally, with the happiest results.

When there is a considerable accumulation in the nares and behind the velum, the *débris* and foul secretions may be removed, and much temporary relief obtained, by an injection of an infusion of chamomile with a few drops of creosote, which may be best effected by a laryngeal syringe. The syringe of Dr. Warren, of Boston, answers a very good purpose for injecting fluid either into the nares or below the epiglottis. It, however, is liable to the objection that it is likely to produce irritation, by coming in contact with the irritable portion, exactly at the opening of the glottis, which is found, by the researches of Prof. Horace Green, to be the seat of sensibility, instead of the epiglottis, as has heretofore been supposed. The common glass syringe, with either a curved extremity or a straight one—dependent upon the part to be reached—answers all ordinary purposes, and possesses the advantage of being easily obtained at the apothecaries, and is of slight cost.

For correcting the fœtor of the secretions, the chloride of soda, in the proportion of one drachm to six ounces of water, may be used with much benefit. Dr. Ranking suggests, on the supposition of the presence of some vegetable parasite, the use of sulphurous acid and hyposulphate of soda, in the form of a saturated solution.* "The power of the latter," he adds, "in destroying the fungoid growth of favus, as well as the oïdium which infests the vine, I have myself experienced; and I strongly recommend it, provided the vegetable origin of diphtheria be confirmed by further observations."

Much relief is often afforded by inhalation, especially after the second or third day of the attack. An excellent means of fumigation is to pour boiling water upon catnip, or the leaves of any similar plant, with the addition of a little vinegar, and to allow the patient to inhale the fumes, either by inclosing the head under a blanket, or by applying the mouth to a tube connected with a close vessel containing the materials from which the vapor is generated. The immediate effect of fumigation is extremely grateful to the patient. Dr. Gurdon Buck advises the addition of Labarroque's solution of the chloride of soda, in successive portions of a tea-spoonful each, to the liquid used for fumigation. Mr. C. T. Hodson recommends the inhalation of boiling water, to which has been added a table-spoonful of chlorinated lime.

*General Treatment.*—The general treatment must be regulated by the type of the disease. Shortly after the appearance of M. Bretonneau's treatise, a great variety of treatment was recommended by different practitioners, all, however, with a view to arrest inflammatory action. Leeches to the neck, counter-irritation, especially by means of blisters, active mercurialization, and purgative medicines furnished the basis of most of the plans advised. Calomel, especially, obtained great celebrity, and was at one time considered as the most effective remedy in arresting the progress of the disease. It was first prescribed by Dr. Conolly, who was residing at Tours, at the appearance of the disease; and was so efficient in his hands, in minute doses, as speedily to find favor with the French practitioners. But, whatever may have been the success attendant upon its administration at that time, it is now found to require great caution in its use.

Blisters are contra-indicated, and so far from furnishing relief, tend to increase the danger, by assuming an unhealthy, and frequently sloughy, appearance. The bites of leeches often give rise to

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* Ranking on Diphtheria.

passive bleeding, extremely difficult to arrest, which greatly reduces the already exhausted energies of the patient. Everything, in fact, which tends to lower the powers of life, or induce prostration, should be sedulously avoided, in the type of disease which at present prevails; and certainly differs from that for which Bretonneau, Conolly, and other medical men in France at that period were called upon to prescribe.

The type of the disease as it now prevails exhibits a tendency to extreme prostration from the very beginning, and requires a tonic treatment to sustain the patient. The most effectual method of accomplishing this is by means of quinine, the various preparations of iron and steel, stimulants, in the form of brandy, milk punch, and wine whey, and a generous diet, consisting of beef-tea, Liebig's extract of meat, and a strong decoction of coffee. Sulph. quinine may be administered in grain doses, conjoined to two grains of the sulph. of iron, repeated as often as the symptoms appear to require—usually every three hours. It is well to alternate this remedy with doses of chlorate of potassa, which appears to exercise a beneficial influence upon the disease of the mouth and throat. Chlorate of potassa may be given in doses of from five to ten grains, in distilled water, or a bitter infusion. Prof. Barker, of New York, advises the chlorate of potassa, in doses from ʒss. to ʒj. The chloride of soda has been recommended with the same intention, but does not appear to be equally efficacious with the chlorate of potassa.

The tincture of the sesquichloride of iron has met with much favor among the English practitioners, as a tonic. Dr. Ranking gives it the preference to other tonics, although he frankly admits that it matters but little which of this class of medicines is used, provided the strength of the patient be sustained. "Personally," he remarks, "I give the preference to the tincture of the sesquichloride of iron, not only from the inference drawn from the analogy of its unquestionable usefulness in the more asthenic forms of erysipelas, but also from the positive evidence of its benefit derived from the experience of several gentlemen in the country, amongst whom I may mention Mr. Dix, of Smallburg; Mr. Prentice, of North Walsham; and Mr. Cowles, of Stalham; each of which has had unusual opportunities of testing its advantages." The tincture of the sesquichloride of iron may be administered in doses of from eight to sixteen drops, in a little water.

Whatever may be the success or ultimate failure of this remedy, its first introduction into the treatment of this disease is undoubtedly

due to Professor Thomas P. Heslop, of Queens College, Birmingham, who, after repeated trials in his own practice, brought it to the attention of his clinical class at Queens Hospital and the Medico-Chirurgical Society of Queens College. His own success appears truly astonishing. "I have given in this disease," he says, "to an adult twenty-five minims of the London tincture of the sesquichloride of iron every two, three, or four hours, and have conjoined a few drops of dilute hydrochloric acid. I have also applied daily, sometimes twice a day, by means of sponges, a solution of hydrochloric acid, but little weaker than the dilute acid of the London Pharmacopœia, and have always enjoined the regular use of weak gargles of the same acid. This, with the constant administration of stimulants, beef-tea, milk and jellies, has constituted my treatment; and I repeat here, what I have already stated in other quarters, that since I have become aware of the value of this medication, nearly ten months, I have not lost one case." An excellent formula for administering a combination of chlorate of potassa and the sesquichloride of iron is: Chlorate of potassa, from 8 to 20 grains; tincture sesquichloride of iron, 10 to 25 drops; rose-water or orange syrup, one drachm; water, four ounces. Where there is difficulty in administering medicine, the bulk may be reduced by omitting the water altogether, and increasing at pleasure the amount of syrup. The success which has attended the use of this remedy in England warrants a careful trial of its merits at the hands of practitioners in the United States.

Where the disturbance of the secretions appears to indicate the use of mercurial preparations, and they are not positively contra-indicated by the depressed state of the patient, calomel may be administered, in doses of one-tenth of a grain, mixed with sugar, and placed dry upon the tongue. Dr. Bigelow has found this remedy valuable in the disease as it prevails at Paris; and Mr. Thompson was equally successful with it at Launcestown, England. Dr. Anderson, of New York, and Dr. Briggs, of Richmond, have employed calomel with marked benefit. It is a question, when calomel and chlorate of potassa are administered conjointly, whether the effects of the potassa do not entirely annul those of the calomel. Dr. Bigelow, as the result of some very recent observations, says, that although it may retard or prevent the specific effects on the salivary glands, it does not in any way modify its action upon the secretions. It may be well, however, when the effect of the calomel is important, to intermit the use of chlorate of potassa for twenty-four hours, or to alternate the use of these medicines at wide intervals between the administration of the two.

Emetics are serviceable when portions of the detached membrane are lodged in the throat, without being expelled, or when the disease is making rapid progress, and threatens to invade the larynx. The action of the emetic in this instance is frequently to detach the pellicle and dislodge the pseudo-membrane. At the same time that the membrane is thus ejected, the throat is relieved of the foul secretions which might otherwise be received into the stomach, to the great detriment of the patient.

But, whatever treatment may be adopted, the fact should never be lost sight of, that the system is laboring under the influence of a powerful and most depressing poison; and it matters but little, so far as the constitutional treatment is concerned, whether this poison be at first local, and afterwards disseminated through the system, or is from the beginning of a general character, and incidentally developed in the mucous membranes of the air-passages. In the performance of her functions in the elimination of this poison, Nature requires to be sustained, not only by the free use of the tonics already indicated, but by a liberal allowance of the most concentrated and nutritious articles of diet, in which beef-tea, milk, eggs, brandy, wine, and coffee stand prominent. When there is difficulty in swallowing, not only these articles of diet, but quinine, may be introduced, by means of injections; a resort to which should not be deferred until it is impossible to administer medicines by the mouth, but whenever the difficulty of swallowing becomes at all a prominent feature in the complaint. Injections should not be administered in greater quantities than two ounces at a time, and should not be often repeated; otherwise they will give rise to a local irritation in the rectum, which will prevent their retention. One or more drops of tinct. opii, according to the age of the patient, will greatly aid in the retention of the injection.

After the violence of the disease has been checked, a continuance of the tonic treatment should be persevered in for some time, not only to prevent the sequelæ liable to follow, but a recurrence of the attack, which often reappears after an interval of several weeks, especially when the patient is exposed to those depressing influences which are too frequently attendant upon poverty and uncleanliness.

*On Retinitis Pigmentosa.* By JULIUS HOMBERGER, M.D., New York. Late Chef de Clinique of Dr. Sichel, Paris.

Pigmented retina was first described by Donders, of Utrecht, as a peculiar disease of the eye-ground, characterized by black points, spots, and lines in the retina, easily detected by the ophthalmoscope. The first case mentioned by Prof. Donders was observed in the eye of a person 35 years of age, who was killed by an accident, having been blind from his early youth, in consequence of an attack of variola. The eye in question presented a degeneration of the cornea, which greatly resembled the sclerotica. The epithelium of the cornea was sound; the iris, the musculus Brückianus, and the ciliary processes were atrophied, the last two partially showing fatty degeneration. Donders' first opinion was, that the deeper strata of the retina were atrophied, and that the superior ones were occupied by a peculiar mass of pigment, particularly in the neighborhood, and following the course of the vessels of the retina.

These accumulations of pigment formed, according to him, a black net over a red ground, when the diseased eye was observed with the ophthalmoscope. Donders admirably compared it to the corpuscula ossea, as seen under the microscope.

Graefe had called attention to certain amblyopies, with atrophy of the pupil, and "black spots" near the equator of the eye, before Donders had given his specific description. These amblyopies were complicated with cataract, obscurations of the corpus vitreum, sclerectasy and constitutional syphilis.

Dr. Liebreich, one of Graefe's assistants, and Von Trigbt, a pupil of Donders, had also mentioned a few cases where the "black spots" in question were combined with the results of a previous inflammation. Donders put much value upon these peculiarities and complications, and reasoned therefrom, that the pigment depended upon an exudation consecutive to a retinitis. Opthalmologists generally now commenced to observe these cases, and various observations of "speckled" or pigmented retina were reported in journals. All observers agreed that the disease progressed slowly, and always found that the field of vision was limited even in the earliest periods of the disease, with almost entire obliteration of eccentrical sight in more advanced cases, but that the functions were not always disturbed in proportion to the amount of material changes; yet these functional changes were generally more serious than those observed in cases of even very severe circumscribed choroiditis or cyclitis.

Donders observed that after a while atrophy of the papilla and the central vessels generally followed.

Clinical observations alone, however numerous and exact they might have been, would probably never have clearly revealed the nature of the disease.

The microscopical study of various eyes extirpated by Dr. de Graefe, and examined by Dr. Schweigger, has, however, thrown some light upon the subject.

Schweigger has established the fact, that retinitis pigmentosa is always the result of a *peculiar choroiditis of a very chronic form, characterized by black reticulated spots and accumulations of pigment in the retina and around its vessels, causing an atrophy of the nervous elements of the retina, and an augmentation of those of the cellular tissue.*—(Heinrich Müller.)

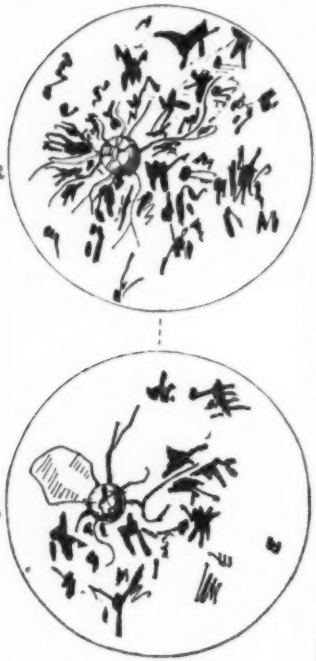
The eye first examined by Schweigger was taken out for an enormous hydrophthalmus and sympathetic inflammation of the healthy eye. It showed the remains of a very severe iritis, in the form of a thick and vascular false membrane covering the pupil and the posterior side of the iris. The iritis had produced on the anterior part of the globe an inflammation of the choroidea, with a large serous exudation into the corpus vitreum. The latter was liquefied and increased in volume, the papilla excavated, the sclerotica partially atrophied and united with the choroidea at several points. The enlargement of the globe had seriously injured the choroidea, which had lost almost all its pigment. *Numerous black colored amorphous "hills" covered the inner part of the choroidea, and entered into the substance of the retina.* At several points the retina and choroidea could not be separated, some portions of the one remaining attached to the other. At these points the nervous elements of the retina were destroyed, some filaments excepted; while the areolar tissue was increased, all the remaining portions of the retina contained pigment.

In that case, the serous exudation coming from the choroidea, perforated the retina, and in this manner the destroyed pigment epithelium was washed away by the exudation, and deposited in the retina, particularly around the vessels, because the meshes of the areolar tissue are not so close around them. It may be that the retinal pigment does not always come from the choroidea, as we have explained, but that exudations of the choroidea may be changed into pigment, and deposited on the external side of the retina.

Dr. Schweigger does not attach much importance to the pigmentary infiltrations of the retina; he even presumes *that the same changes*

*in the choroidea, which float off* the pigment, may often exist without being followed by deposits of pigment under the retina, so that, ophthalmoscopically, the appearance is the same as that called "cerebral amaurosis."

This theory is not yet established, nor is it easy to sustain it by experience; but the fact that small masses of pigment are associated with almost entire blindness, and a small field of vision, while large colored spots sometimes cause very little disturbance, would seem to verify it.




Having now given a brief sketch of the history and nature of "pigmented retinitis," or, perhaps, it would be better to say, "pigmentary choroiditis," I may close this paper by illustrating it by a case I observed in Prof. Graefe's clinic, notes and drawing of which I took at the time.

A woman, about fifty-two years of age, presented herself for blindness, being totally unable to conduct herself. She is entirely blind in the left eye, not being able to distinguish day from night. In the right eye the field of vision is very limited; she can just discern the light of a lamp when it is moved in the room. Both of her eyes present obscurations of the lens. Slight cloudy membranes are observed near the posterior pole of the lens, which are easily looked through by means of the ophthalmoscope, the eye-ground being distinctly seen at the bottom. The iris is degenerated in both eyes, so that its texture and fibres cannot be exactly distinguished. The sclerotica is normal.

There are no obscurations of the corpus vitreum; the papillæ are deeply excavated; the vessels in their neighborhood only are distinguishable, looking like yellowish-white lines. Almost all the eye-ground, and particularly the upper parts of it, (the under part in the image, for I observed it inverted,) is covered with spots, (already described.) The vessels of the choroidea are not to be seen, as its pig-

ment is very dark. The pigment of the retina follows the vessels, the latter being visible. In the left eye the change is much greater. The vessels can hardly be seen, are much less distinct than upon the other side; the chorioideal epithelium is lost, to a great extent, near the papilla, (see cut,) but the accumulation of pigment is not so large as on the right side. The left eye is entirely without quantitative sensitiveness to light.

The treatment of retinitis pigmentosa is, in such a case, it is hard to say, hopeless. Perhaps an antiphlogistic and antiplastic treatment might prevent the disease, if administered at the period of commencing choroiditis, but in this stage it is of no use; the material changes—destruction of the retina, excavation of the papilla, and atrophy of the vessels—will continue to progress. The prognosis is, consequently, very doubtful. The sooner the disease is discovered, the greater the chance of relief; but in the present state of ophthalmological science, there is no positive help. Let us hope that there may soon be found a remedy for retinitis pigmentosa, such as iridectomy is for glaucoma.

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*A Case of Purpura Hæmorrhagica.* By W. H. Butler, M.D., East Saginaw.

In the March number of the *Buffalo Medical Journal*, for 1859, Vol. 14, p. 592, I reported a case of this disease, which was preceded by a scurfy desquamation, (in that case on the neck,) a circumstance, I think, not generally mentioned by medical writers. I have now to report another case, occurring in a female child, five months old, which commenced in like manner. This child had been brought up on the bottle; the mother, a pale and rather delicate woman, never once having been able to nurse it. It was pale and feeble from birth, no food agreeing with it, but a few days at a time. Its principal sustenance had been arrow-root boiled in water; cow's milk in any form disagreed, and had to be abandoned.

Dr. J. B. White, of Saginaw City, whose patient it was, called me to see it, September 20th, when it was suffering, as it had been almost from birth, with diarrhœa and vomiting, and was also teething. A few days after my first visit it cut its first central incisor on the lower jaw, and the others seemed to be rapidly coming forward. Various remedies were unavailingly tried for the diarrhœa, which vacillated between better and worse, until October 3d, when it was remarked that the child had a scurfy eruption under the right ear, involving

part of the neck and cheek, and that it had purple spots on the feet. I saw the child on the fourth, and had no question of the nature of the difficulty. Spots were on the feet, legs, back, arms, and head.

Dr. White, the day before, as a dernier resort, had lanced the gums over one or two of the teeth, and the cut surface had bled considerably during the afternoon and night; for this tannin and nit. silver had been applied in vain. Blood had also flowed from the vagina. At the time of lancing the gums, the purple spots had not been observed. Suggested gallic acid internally, with perchloride of iron to the gums, brandy and such other nourishment as had been used, rice-water, corn starch, &c. It was impossible for the child to keep anything down more than a few moments, and only by the most assiduous care of the mother was it kept alive; for to this source we must attribute its lengthened existence. Death came October 7th; it was then five months and two days old. We were not permitted to make a post-mortem to determine whether the spleen or kidneys were affected, as in other cases, but we noted externally spots on both feet near the ankle, an inch or more in size; these were of blue, with a purplish tinge. Quite a large one across the back by the shoulder-blades, another near the hips; the centre of the latter had a bright-red look. The abdomen was thickly interspersed with pale, freckly-appearing spots, from the size of a pin's head to an eighth of an inch in diameter. There were also spots on the left side of the head and under right knee. The spots of effused blood were rather limited in number, and none were of much extent. It has never been my lot to see so peculiar a corpse; it had the cold, bloodless look of the whitest marble; even the margins of the lids and lips had the same white look that strikes you as the most unnatural part about a marble statue. Every portion, save the occasional spots, bore more the look of art, than either animate or inanimate human flesh.

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*A Case of Dislocated Os Humerus, of Eleven Years and Ten and a Half Months, successfully reduced.* By WM. H. HUBBARD, M.D., Gravesend, L. I., Kings County, N. Y.

Mr. Edward Tunstall was born September 8th, 1787, at Reinford, England; was injured in September, 1848, on the Liverpool and Manchester Railroad, by falling on the platform of Hayton Station. Having for a long time been afflicted with rheumatism in the shoulder, no attention was given to his case, and without professional advice he re-

mained in this state, and came to America in 1856, and on the 4th August, 1860, I was called to visit him, and prescribe for him, for an attack of *pneumonia*. During my investigations, I discovered that the shoulder-joint was dislocated upward and inward, under the clavicle, and upon inquiry found the particulars as above stated. I advised the old man to have it reduced, as his arm was almost useless; he had kept the shoulder-joint without motion, nearly the whole of this long time, by use of a sling; he finally consented, and on the 5th August I made the trial with Jarvis' Adjuster, and succeeded in reducing the bone to its natural position, to the joy of himself and friends, and to my great satisfaction. It is now nearly six months since the reduction. He has the use of his arm as well as ever, except he says it is not as strong as the other. His residence is with his son, in the village of Greenfield, near Flatbush, Kings County, N. Y.

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*Transactions of the Medical Society of the County of Kings.*

1860. JANUARY.

*On Veratrum Viride.* By Dr. Otterson.

I do not propose to read a disquisition upon the veratrum viride, but simply to call the attention of this Society to this article of the materia medica, for the purpose of opening a discussion and eliciting the experience of its members upon its use, and at the same time take the liberty of making a few suggestions for its practical application.

A few years ago, when the paper of Dr. Norwood was first published, and the article came to be prescribed and canvassed among us, many of our physicians and most of the apothecaries supposed reference was had to the ordinary white hellebore, which has long been known in our shops, and in works upon materia medica.

The veratrum viride is not the white or European hellebore, furnished by the mountainous districts of the continent; but is the American hellebore, and is found in swamps and low grounds from Maine to Georgia; it is on this account sometimes designated swamp hellebore. In the United States Pharmacopœia and Dispensatory it is called veratrum viride, and by that name it is now familiarly recognized.

This article has never been used in the regular practice to any extent, although Prof. Tully, of Yale College, New Haven, had been in the habit of prescribing it in his practice, and recommending it in his lectures, many years ago. In the August number of the *American*

*Journal of the Medical Sciences*, 1835, Dr. Charles Osgood, of Providence, R. I., published an account of his investigations and experiments with it, his attention having been called to it by Prof. Tully; still it received little or no attention from the profession at large, until the papers of Dr. Wm. C. Norwood, of Cokesbury, S. C., appeared about the year 1850.

That gentleman had been using it for several years, and his papers on the subject aroused the attention of the profession to what many practitioners, and myself among the number, considered a remedy of great importance, as well as power. The best mode of prescribing the veratrum viride is in tincture; and as Dr. Norwood's preparation is now in the market, for the sake of uniformity, and while it is comparatively a new remedy, I should recommend that it be always prescribed. Its effects upon the system are generally prompt, certain, and of such power as not to be entirely void of danger. In its operation as well as in its nativity, the veratrum viride differs from the ver. alba., in that it does *not*, like the alb., produce catharsis, which is the principal operation of the latter; on the contrary, it is quite promptly emetic, and not cathartic at all. But its chief action, and that which gives to it its remedial value, is its wonderful control over the the circulatory and nervous systems. It possesses in a pre-eminent degree the power of calming nervous excitement, and reducing the force and frequency of the heart's contractions.

It is indicated in all that class of sthenic diseases where prompt and persistent sedatives are required; and has the advantage over the lancet, in that its effects can be continued by slight repetitions, without reducing the vital powers, as would the same repetition of the lancet. It is preferable to digitalis, in that it is more prompt and certain, and has not yet been found to possess that cumulative property which constitutes one of the dangers of, and objections to, digitalis. It is preferable to antimony, in that it does not produce such violent enteritic irritation and griping diarrhœa, while as a sedative it is considered by many superior; and as an *expectorant*, fully equal to the antimony; its diaphoretic properties are about the same; in its local effects, it somewhat resembles this drug, as, when applied to the skin, it produces heat and irritation, though not such an eruption as will the antimony. The same may be said of its effects upon the alimentary canal. Hence it is contra-indicated when any gastric or enteritic irritation exists. I will now, in as few words as possible, introduce this new friend to a place in the society of those old and long-tried ones, upon whose virtues we have been so long accustomed to rely. Nor have I

any doubt that the addition will be found both pleasant and profitable.

I would recommend Norwood's tincture to be prescribed, in preference to Tilden's, or any other fluid extract, because I think it likely to be more uniform in strength, and hence in its effects.

It is adapted to all diseases requiring the action of the heart and arteries to be controlled, except, as above stated, those attended by gastro-enteritic irritation.

In the latter stages of disease, where the rapid action of the heart is consequent upon the progress of the disease, it should not be employed; such as the latter stages of fevers, when there are nervous symptoms and excessive cardiac action, attended with much prostration.

I think the doses recommended by Dr. Norwood, and some others, too large to commence with, particularly by those unaccustomed to prescribing it, and would rather advise them to commence with half the quantity, carefully observing its effects until they become familiar with them, and their own experience will be their most reliable counselor.

I have used it myself in pneumonia, pleuritis, acute rheumatism, inflammatory croup, iritis, puerperal peritionitis, and nervous palpitation of the heart, and have occasionally added a few drops to expectorant mixtures, where the cough was produced or attended by bronchial irritation, which seems to be extended to the minute vesicles, and the expectoration difficult and albuminous in its character; and I must say, I consider it a most excellent addition; in its administration I have seldom commenced a case with more than three to four drops, repeating it in two hours, and then adding by one drop, at each repetition, or diminishing the quantities, and lengthening or shortening the interval as circumstances might demand. I have generally found a much less quantity to bring down the pulse as low as I required, than that mentioned by Norwood, and some others. When emesis is once produced, the pulse generally comes down sufficiently, the skin softens, or a profuse perspiration breaks out, and the great point is attained. This, as before stated, is easily continued by the occasional repetition of the remedy in very much diminished doses, varying, of course, as with all other medicines, according to the susceptibility of the patient. When emesis is once produced, I find two or three drops every hour or second hour control the symptoms which indicated its administration.

Reference has been made to the *power* of the veratrum viride. It sometimes occurs that its operation is active beyond anticipation, and

excessive emesis and prostration, even it may be to an alarming degree, are produced. This may be immediately counteracted by the administration of stimulants; a little weak brandy and water with a few drops of laudanum in it, or a few spoonsful of camph. julep with laudanum, answer the purpose. I have never seen a case requiring carb. ammon., although it is advised. Sinapisms to the stomach are useful addenda to the treatment. In excessive emesis anodynes seem to be the antidote, and laudanum or syrup morphia are always at hand.

I have made this imperfect and disjointed sketch, as at first stated, in order to elicit the experience of such as may have prescribed this remedy, and with a view to bring it to the attention of those who have not. Not that I consider our pharmacopœias deficient in the number of remedies they present; by no means; and yet I think new remedies of undoubted virtues should find there a place; notwithstanding they may be new to the great majority of our members. I presume the administration of this is new. At the South it is in extensive use, and highly prized, and by those who pretend to prescribe vegetable remedies only; it is at once in combination, their lancet, their digitalis, and their antimony; with them it is *tria juncta in uno.*

While I hope I may not be accused of being carried away with a *new* thing, and making of it a hobby, which I am very positive I do not, I would yet recommend, as thousands have done before me, in every pursuit of life, that good old Scripture doctrine, "Try all things, hold fast that which is good."

## FEBRUARY.

*Treatment of Gonorrhœal Epididimitis by Incision of the Tunica Vaginalis Testes.* By JOHN G. JOHNSON, M.D.

It has often been remarked that affections of the mamma in the female breast, and of the testes in the male, are the source of more anxiety to the patient, in proportion to the danger attending them, than diseases of any other organs. Prominent among them, in its claim on the city practitioner, stands gonorrhœal epididimitis, both from the frequency of its occurrence and the unfortunate sequences that may result from it.

Few diseases are attended with more excruciating pain. In none are the directions of the physician more frequently disregarded, from the patient's desire to avoid exposure; while the detention from business caused by the ordinary methods of treatment is a matter of no slight importance, occurring, as the disease frequently does, in the midst of the busy season, when hours are of more value to the patient than days at other times.

There are graver matters than these, however, which should be considered in determining the treatment. The destruction of the virility of the organ, abscess of the testes, strumous degeneration, and even cancer of the testicle, may result from gonorrhœal epididimitis; and other things being equal, in proportion to the length and severity of the attack, is the probability of their occurrence. These sequences are so well established by the ablest authorities that it is hardly necessary to quote them. Ricord says, "The gravity of the affection is only in proportion to its complications. Thus, in scrofulous individuals, it may be the accessory cause of the development of tubercular sarcocele, which, in Germany, has been wrongly considered a direct consequence of gonorrhœa virulenta, so called.

"In a cancerous diathesis it may be followed by cancer of the testicle; and in patients already affected by constitutional syphilis, it may occasion syphilitic sarcocele."—(Ricord's Hunter, Am. ed., p. 96.)

Curling says, "The most common cause of atrophy of the testes is the disturbance of its organization consequent upon inflammation. As the inflammatory process ceases, the enlarged gland not only becomes reduced to its original size, but it sometimes slowly and steadily diminishes, till at length very little vestige of it remains. Mr. Hunter has related three cases in which the testicle decayed in this way. I have met with two instances of atrophy arising from this cause, and there are few surgeons of experience who have not witnessed cases of this kind. Wasting is more liable to occur after inflammation of the body of the gland, than after consecutive inflammation, in which the epididimis is the part chiefly involved."—(Curling, p. 30.)

Miller, in his Practice of Surgery, thus refers to this fact: As the complaint yields, the discharge may be expected to appear at the orifice of the urethra. Very frequently resolution is incomplete; hardness and swelling remain in the epididimis. These require active perseverance; local discutients and iodide of potass. may be useful internally. In some instances, resolutive absorption is not only rapid; the gland, after regaining its normal size, continues to diminish, and may ultimately dwindle down to a mere shred, wholly destitute of its proper function.—(P. 566, 3d Am. ed.) Abscesses sometimes form; when this does occur, Curling says, "When inflammation terminates in suppuration, owing to the density, thickness, and low organization of the tunica albuginea, the matter is so slow in making its way externally, that it generally burrows in various directions, producing numerous sinuses throughout the gland, and disorganizing its delicate structure."—(P. 283.)

Tubercular degeneration of the testicle may be a sequence. Ricord says: "After gonorrhœal epididimitis, it often happens that the epididimis remains engorged and indurated, or, at least, hypertrophied; as Hunter remarks, it generally does no harm, but, under some circumstances, this continued abnormal development is due to a strumous diathesis, and is only the prelude or exciting cause of tubercular sarcocele. Indeed, tubercular sarcocele succeeds gonorrhœal epididimitis so frequently, that in Germany this tubercular affection is considered a specific consequence of gonorrhœal virus. This again is a mistake; tubercular degeneration in this differs in no respect from what it is under any other circumstances."—(Ricord's Hunter, p. 159, 3d Am. ed.)

Both vasa deferentia may become obliterated and produce sterility as a consequence of gonorrhœal epididimitis, as is shown by the researches of M. Gosselin.—(Idem.)

Neuralgia of the testes may result. Curling, p. 409, says: "In several cases it has succeeded an attack of orchitis, continuing to distress the patient after all inflammation has subsided, and recurring or increasing as he gets out of health."

Sir Benjamin Brodie gives the following account of the dissection of a testicle which had been attacked with inflammation from a gonorrhœa twenty years before: "It was smaller than the other testicle, and part of it was considerably indurated. On making a section of the gland, he found that about two-thirds of the tubuli testes remained in their natural condition, while the remainder had been converted into a fibrous substance, having the consistence, but not the fibrous structure, of ligament. In these cases the fibrinous matter effused in the cellular tissue, not having been absorbed after the cessation of inflammatory action, had occasioned partial atrophy of the proper structure of the organ, and been converted into the dense tissue above mentioned." In old cases the epididimis acquires the density and consistence of cartilage, and sometimes even of bone.

*These changes are rarely found without the presence of old adhesions, obliterating partly or completely the sac of the tunica vaginalis.*—(Curling, pp. 285 and 286.)

The results obtained have been far from satisfactory, if we are to judge from the variety of remedial means proposed. Cooper, in his Surgical Dictionary, says: "Rest is the best remedy, and the horizontal position of the body is the easiest; at all events, the testicle must be well suspended. The case is to be treated as inflammation in general, by bleeding and purging, and applying fomentations and poultices. James on Inflammation, p. 164, on the contrary, recommends

cold applications. Vomits have been recommended by Hunter and others. Curling recommends rest, elevation of the nates to favor the return of the blood, evaporating lotions, and has seen most beautiful results from the nausea produced by tartar-emetic, continued for 30 hours. He approves of a smart purge, absence of animal food, and tartar-emetic, $\frac{1}{4}$ grain every 3 hours; and when the tunica vaginalis is involved, he recommends mercury, which has been found so valuable in serous inflammations. The application of from 8 to 30 leeches is recommended by most modern authorities. The severest method of treatment, and, unfortunately for the patient, very generally adopted, is that advised by Prof. Fricke, of Hamburg, of compressing the testicle by straps, evenly and firmly applied over its whole extent. This he advises as a primary measure, and the straps to be reapplied every day; the average duration required for this method of treatment being 8 or 9 days. Other surgeons approve of this method of compression, when the violence of the inflammatory action has abated. The introduction of venereal matter into the urethra has also been absurdly recommended, under the supposition that the orchitis was the result of metastasis, and to bring back the discharge to the urethra.

Bromfield recommends irritating the urethra with bougies for the same purpose.

M. Velpeau first proposed to evacuate the serum by single or multiple punctures. M. Velpeau's method of treatment is as follows: The lower and posterior part of the tumor, where the testicle is usually situated, is grasped by the left hand of the operator, while with the right he plunges a lancet perpendicularly into the bulging mass of the fluid, above and in front. One or more incisions are made, which are followed by a jet of serum, or a few drops of blood.

In an interesting lecture upon this subject, delivered at La Charité, with statistics of thirty-seven cases of gonorrhœal epididimitis, in all but seven of which the amount of fluid was marked, M. Velpeau sums up his treatment as follows: The treatment of these patients has consisted in the employment of rest, cold, suspensories, mercurial inunction, and either single or multiple punctures with a lancet, abstaining from leeches. Punctures, by giving issue to the fluid, give great relief to the patient, certainly abridge the duration of the disease, and exempt from inconvenience.—*British and Foreign Medico-Chirurgical Review*, 1857.

The operation of incising the body of the testicle was first introduced by J. L. Pettit, and revived by Vidal de Cassis. It is performed in the same way as that of M. Velpeau; both in the orchitis

and in simple epididimitis. The incision through the tunica albuginea is from one-half to three-quarters of an inch. Vidal de Cassis has performed it, without any bad result, over four hundred times. He regards the result as in the highest degree satisfactory. It removes the strangulation, relieves the excessive pain, and acts as a powerful antiphlogistic in reducing the swelling.

Pathology should be our guide in determining the treatment of these cases. The lesions are such as we might expect to find as a result of inflammatory action. Curling says: I have twice been able to inspect a testis affected with (gonorrhœal) secondary orchitis, and the following description of the pathological appearance is drawn up from those examinations and from the account of the dissection of two testes affected with gonorrhœal inflammation, recorded by M. Gaussail. The tunica vaginalis is more or less distended with lymph or albuminous matter, infiltrated with reddish serum, which form loose adhesions between the opposed surfaces of the membrane. These adhesions are so slight as to admit of being easily broken down with the finger. The membrane is injected with a multitude of red vessels, which ramify in various directions, and form a compact network; at a later period vessels may be traced proceeding from the free surface of the tunica vaginalis to the false membrane forming the adhesions. The volume of the testis appears very little if at all increased; the great volume of the tumor being occasioned by effusion into the serous sac.

When cut into the gland it appears somewhat darker than natural, from a congested state of its vessels. The epididimis is enlarged to twice and sometimes thrice its natural size, and feels thick, firm, and indurated. This enlargement is produced by the effusion of a brownish deposit into the cellular tissue, between the convolutions of the duct. The coats of the vas deferens are thickened, and the vessels ramifying near them, injected sometimes along the whole length of the duct. Albuminous deposit is found in the cellular tissue around the tortuous part of the vas deferens and tail of the epididimis, which frequently forms the bulk of the swelling in these cases.

M. Ricord has presented to the Academy of Medicine, of Paris, specimens, and his views of the pathology are as follows:

The epididimis is at first engorged, and then the vasa deferentia. If it is at all severe or constitutional, it becomes complicated. The most common complication is undoubtedly effusion into the tunica vaginalis, or hydrocele. This effusion, which M. Rocheux believed to be the principal affection, is sometimes due to a transparent, serous exhalation, of a pale-yellowish color, as in passive dropsy, caused by obstruc-

tion of the circulation, and sometimes on the contrary; and these are the rarer cases; it is the consequence of true inflammation of the serous membrane, and presents all the shades of color of pus, false membranes, and diluted blood, which are generally met with in serous inflammations. These differences, which may be already distinguished by the greater or less transparency of the effused fluid, are placed beyond a doubt in those cases in which the fluid is evacuated by puncture. The most common complication, next to the one just mentioned, is the engorgement of the cellular tissue beneath the scrotum and around the cord. The skin in that case is no longer movable on the subjacent parts. The vas deferens is lost in a solid cord, the component parts of which cannot be distinguished, and which is sometimes so large as to be strangulated by the tissues which it traverses.

These engorgements, which, under some circumstances, are only œdematous, are sometimes decidedly inflammatory, and may terminate in suppuration and abscess; and finally the skin may become involved, and take on œdema and erysipelas. The body of the testicle is certainly one of the parts most rarely involved. Whenever the testicle is swollen by inflammation and there is true orchitis, the pain is intolerable, in consequence of the constriction exercised by the tunica albuginea. When suppuration supervenes, it most frequently takes place in the subcutaneous cellular tissue, next around the epididimis, and next in the body of the testicle, in true orchitis.

Pathological anatomy has confirmed all that careful observation at the bedside of the patient had anticipated. In simple cases, the epididimis alone is affected, of which I have shown cases to the Academy of Medicine. I have found the tunica vaginalis containing fluid or empty, presenting pus or false membranes. When the testicle presented any changes, it was shown that they commenced near the epididimis, and that they consisted of an effusion of plastic lymph, as Sir Astley Cooper has so well shown, together with compression or more or less complete obliteration of the vasa deferentia; but in every case, the normal elasticity of the organ was lost. MM. Gausail, Rouchoux, and Velpeau have all presented similar pathological facts.

The lesions, which all authorities agree are the most common, are, 1st, serous effusion into the tunica vaginalis; 2d, congestion of the epididimis, followed by the effusion of plastic lymph; 3d, true orchitis.

The method of treatment I prefer is as follows: The testicle should be held in the left hand of the operator, in the same manner as if he was operating for hydrocele. With a sharp lancet, a free incision should then be made through the scrotum, and the tunica vaginalis of the

lower and anterior portion of the testes; and if there is reason to suspect true orchitis, the tunica propria may also be incised. This seems to me to be the most common-sense method that can be adopted. By the division through the scrotum, we have abundant local depletion—the engorgement of the scrotum is relieved, and we have an amount of depletion greater than is obtained from leeches. As the tunica vaginalis is divided, there is usually an escape of a drachm or two of pinkish serum. In other words, you have had a small hydrocele, which has been thus relieved. There is no danger, in dividing the tunica propria, of wounding the testes, for the constriction in true orchitis is so great, that as soon as the tunica propria is divided, its edges recede and the constricted substance of the testicle bulges out. The advantages from this method of treatment are many. 1st, There is an immediate relief from the pain—I have never seen more immediate relief given to a patient with a bone felon—by dividing freely down to the bone, than is that afforded to a patient suffering from acute gonorrhœal epididimitis, by dividing this constriction over that highly sensitive organ, the testicle.

A patient was brought to my office in a carriage, who had fainted in his store from the pain of the epididimitis. He could hardly bear my hand to touch it. I divided the red, shiny and tense scrotum, &c., through, till the bulging body of the testes was seen in the wound. The bleeding was favored by warm fomentations. At the end of half an hour, the patient gathered up his clothes with an air of comfort which was quite surprising, and walked out of the office with a smile, which showed how great and how immediate had been the relief. If the immediate relief was the only advantage possessed by this method of treatment, it would entitle it to our consideration; but it seems to me to obviate the great danger of those sequences which, we have seen, may result from an orchitis. Thus, in case of atrophy, we find the atrophy was caused by pressure and by the effusion of lymph, which went on till it was organized. That pressure causes atrophy, is shown by the fact that pressure in other cases causes atrophy of the testes. We very frequently find a patient with a large, old scrotal hernia, has atrophy of the testis, that is compressed; the mere weight of the hernial sac and contents being sufficient to produce atrophy of the testis. Again, it is no uncommon thing to find that a patient who has worn an ill-fitting truss for scrotal hernia, has atrophy of the testis from the pressure of the truss. Atrophy of the testis is found often where there is an old hydrocele. The pressure of fatty

and other tumors produces the same result—atrophy of the compressed organ.

Hunter says, "Testicles have been known to waste in cases of rupture, probably from the constant pressure of the intestine. Mr. Bott has given us cases of this kind. I have seen in the hydrocele, the testicle almost wasted to nothing; probably from the compression of the water."—*Ricord's Hunter, Am. Ed.*, 1859. Authorities in abundance could be adduced. They are found in every work that treats of atrophy of the testes, and the fact is too well known to need the collating of authorities.

By this division, you relieve the compression produced by the firm tunica vaginalis, distended as it is, and the still further constriction produced by the tunica propria, and thus obviate the danger from the compression. The effusion and organization of plastic lymph is prevented by this means. The lymph is allowed a free exit before it becomes organized, and by the depletion the inflammatory action is allayed, and the further formation of plastic lymph is prevented. We thus make use of the most efficient means in our power to prevent the occurrence of atrophy of the testicle; namely, by obviating the compression and effusion. It will be remembered that Sir Benjamin Brodie states that atrophy is rarely found without the presence of old adhesions, obliterating partially or wholly the sac of the tunica vaginalis. Is it probable that these adhesions will take place when the inflammation is allayed as rapidly as it is by this means? Again, we are sure of our treatment. If we send our patient home to take antimony for two or three days, or to the druggist's to have a dozen leeches applied, we are not always certain that the fear of exposure will not make him neglect the treatment in the one case, or the expense make him hesitate in the other. If we operate in this way, we are sure that the relief is afforded to the patient, and have the satisfaction of seeing the benefit he derives from it.

Some of the advantages of this method of treatment are, 1st, The speedy relief; enabling the patient, if necessary, to go at once to his work. 2d, It obviates the danger of atrophy and the other unfortunate sequences resulting from prolonged pressure, by removing at once the exciting cause. 3d, The certainty of the treatment.

The only objection that appears to be adduced to this method of treatment is the bugbear one of wounding the tubuli testes. We must remember that Ricord, Velpeau, Vidal de Cassis and I. L. Petit, practice a far more severe method—that of plunging a lancet directly into the body of the testicle. Vidal de Cassis states that he

has performed this operation 400 times without bad result. If, then, incision into the body of the testicle can be made with such impunity when it is inflamed as it can be, unless the veracity of such authorities as Velpeau, Ricord, Vidal de Cassis and I. L. Pettit be impugned, there certainly can be no danger in the slight cutting of the substance of the testes, that might be produced by this operation.

The advantages over all the ordinary methods of treatment are marked. A brief comparison of the various methods of treatment with this, will convince most.

Inflammation of the tunica vaginalis is the most common complication; for this Mr. Curling advises the use of mercury, which has been found so valuable in serous inflammations. To say nothing of the rapidity of relief afforded by either method, will the physician injure his patient's contstitution willingly, by bringing him under the prostrating effects of mercury, expose him to the risks of salivation and consequent discovery, when so immediate, simple and efficient a remedy can be used as the one recommended in this article?

The treatment by the use of compression is so inhuman that it should be abandoned. When we consider how susceptible this organ is in health—and the susceptibility increased by inflammatory action is so great that the patient can hardly bear to have us touch the testicle without a shudder—that it is proposed to renew the straps daily, and thus to force by methodical compression this highly sensitive organ into a compass smaller than the already too unyielding tunica vaginalis and tunica propria, will allow is a refinement of cruelty which should meet with the disapprobation of every humane surgeon. An esteemed professor, in a lecture on this subject, once remarked that his first impulse, when he saw a surgeon thus strapping an inflamed testicle, was to seize the surgeon by his testes, and by this practical demonstration of the cruelty of the treatment, teach the surgeon humanity.

Curling disapproves of the compression in the acute stage, and allows it only when the violence of the inflammation has been reduced by tartar-emetic. Ricord approves of it only in the induration of the epididimis, which often remains.

As far as my experience goes, if the tunica propria is opened at first to allow free evacuation of the effused serum, the testicle well supported with a suspensory bandage, and kept in a warm and moist condition by the use of a dossil of lint, wet with tepid water, wrapped around it, and covered with oil silk, there will be very little need of

resorting to methodical compression to promote the absorption of effused lymph.

Even in those cases in which lymph is effused, is there not more danger of producing atrophy of the testes by compression than would result from allowing the lymph to remain?

If we consider the delicate structure of the tubuli testes and the liability to decay, which John Hunter says is more apt to occur in the testes than in any other organ, do we not run a greater risk of producing atrophy by compressing this delicate structure than would occur without the use of the straps?

This method is far more efficient and rapid than the use of leeches; and at the same time, we avoid the irritation resulting from leech-bites; the itching from these is sometimes so great that the patient not unfrequently produces troublesome sores by scratching them.

Again, many patients feel a delicacy in going to a leecher's and sitting till the leeches have finished drawing.

As to the prolonged use of tartar-emetic, there are few of us who would willingly submit a patient to the prostration and continued nausea which this medicine produces, when means so simple and so efficient are at hand.

I have too vivid an impression of the deadly nausea produced by this remedy to wish to give it the full trial. Those of us who, in our early childhood, have had this remedy freely administered as our anxious physican stood by us, in fear of impending croup, as dose after dose was forced down us, have too thorough experience of that word nausea to wish to place our patient in this condition and to continue it for thirty hours at least.

To those who have not this experience, and with whom this method is a favorite treatment, I would recommend the course pursued by Profs. Saunders and Bard, for testing their materia medica, as related by the venerable Dr. Francis; Bard taking the antimony, and Saunders noticing the effects. If, after this experimental trial, antimony is a favorite remedy, they are welcome to use it in these heroic doses.

Venesection has been recommended, but it is so rarely employed as to hardly need alluding to.

By this means we have, then, immediate relief of the constriction and danger of atrophy, &c., and an immediate relief from the pain, enabling the patient to return immediately to his business, if necessary, and thus we avoid the risk of exposure.

The induration rapidly subsides, and the wound closes readily.

MARCH, 1860.

*Case* 1.—DR. J. C. HUTCHISON presented a specimen of *Comminuted Impacted Fracture of the lower end of the Tibia*, with fracture extending into the joint, which was not detected until after amputation, with the following history:

Patrick ———, intemperate, 22 years of age, was run over by a city railroad-car, on 10th March, which produced a compound fracture of the ankle-joint. He was removed to the Brooklyn City Hospital, where his injury was examined with care by Drs. Minor, Enos, Kissam, and Hutchison. The astragalus was found to be comminuted, the fibula fractured, the soft part greatly lacerated, and although the finger was readily passed into the tibio-tarsal articulation, the fracture of the tibia was not discovered; reaction had occurred sufficiently to allow amputation of the limb below the tubercle of the tibia, forty-one hours after the accident. On examining the amputated part, the soft tissues, as is usual after such accidents, were found lacerated and contused much higher up than was apparent before the operation. On examining the tibia, it will be seen that the lower third is broken into a number of fragments, which are so impacted that little or no displacement has taken place; the fracture has also extended into the joint.

The specimen is one of great interest in a medico-legal point of view, as indicating that an impacted comminuted fracture, *involving a joint*, may exist without being detected by careful examination. Such an injury would in all probability be followed by anchylosis, if the limb was sound at all, which would make the surgeon liable to censure, or a suit for malpractice.

*Case* 2.—In connection with this case, DR. HUTCHISON mentioned another case of railroad injury, for which he had performed amputation within a few days, for the purpose of *showing that the intervention of a joint will limit the lesion of all the tissues, however severe, notwithstanding the close proximity of the injury to the articulation.* The patient, a boy, about 20 years of age, had his right leg run over by a Long Island railroad-car, which, with the exception of a small piece of integument, completely separated it from the body at the tubercle of the tibia. The bones of the stump were denuded nearly to the knee-joint, and a portion of integument was lost for a considerable distance above the knee posteriorly. He was removed to the Brooklyn City Hospital, and amputation was performed when he had reacted, (six hours after the accident,) at the middle third of the thigh; the patient died on the same day. On examining the amputated part, it was

found that the soft tissues above the knee were entirely free from the laceration and contusion which always accompany such accidents, and extend for a considerable distance above the apparent limits of injury.

This case, therefore, proves that a joint may limit the destruction of soft tissues by railroads and heavy machinery, &c., so as to permit amputation to take place immediately above it, or even at the articulation, if there be sufficient integument to cover the stump.

Dr. Minor reported *three cases of Varicose Veins, treated by the Injection of Solution of Persulphate of Iron.*

The first case was of the veins of the scrotum, in which both the superficial and the deep-seated veins were implicated. The superficial veins were *first* injected, with the effect of their complete obliteration. Subsequently the same operation was performed on the deep-seated veins. This was followed by the formation of a tumor of coagulated blood, which ulcerated out. The operation was successful.

The other two cases were of the veins of the legs, in which the operation was attended with like success, except that the coagulum was not ulcerated out. One of the cases is cured, and the other is convalescent.

The peculiar advantage in the use of this agent is, that *iron* is not inimical to the human tissues, and excites *adhesive* inflammation. It thus obliterates the vein without constitutional, and with insignificant local, disturbance. The solution in one of the cases was very weak and small, consisting of *two drops* of a mixture of one part of the persulphate to three of water. The others were a little stronger.

Dr. Minor also related a case of much interest, from the great obscurity and vital importance of the diagnosis.

A woman, on a Wednesday, found a small tumor near the groin, for which there was no known cause. It gave no serious inconvenience, and she stated that she had had a similar tumor in the same place before, but it had gone away of itself. She did not apply for aid until Saturday, and entered the hospital Sunday morning. He found a round, hard tumor, situated below Poupart's ligament, which could be shifted about under the skin. It was painless and solid, and was first thought to be a gland, but excited suspicions of hernia, inasmuch as the patient had vomited previously, although not within the last twenty-four hours. She had a sense of constriction about the waist, the pulse was natural, and there was no prostration.

On a second examination, it was thought not to be hernia, but that

a hernia might lie behind the tumor. He cut down upon it, and came to a peculiar substance, dark-colored, and amorphous, having the appearance of a parenchymatous glandular structure, and thought it might be the inside of an inflamed gland. A director was passed into it, and on opening it, displayed the shining and almost black surface of intestine, which looked at first as if it might be a clot of blood. The stricture was relieved, the gut returned, and the patient recovered.

He came to the conclusion, from the condition of the sac, that it had been thickened by repeated occurrences of hernia, but does not know how to explain the round, dark, granular appearances observed.

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## MONTHLY SUMMARY OF AMERICAN MEDICAL JOURNALISM.

By O. C. GIBBS, M.D., Frewsburg, N. Y.

*Ovariotomy.*—In the *N. A. Medico-Chirurgical Review*, for January, Prof. Henry Miller reports a successful case of ovariotomy. This is the third successful case that has occurred in the practice of Prof. Miller. He does not tell us how many times he has operated. In this case, Prof. Miller dressed the wound with the stump fixed exterior to the cavity of the abdomen, as recommended by Spencer Wells. He makes a remark upon this point that is particularly worthy of consideration. "If, when the pedicle is left in the abdominal cavity, the suppuration and sloughing are equal to what I observed on the outside, and there is no reason to suppose that there is any difference, then I am disposed to think that it would be always better to proceed as I did in the present case, for there must be danger when the pedicle is left within the body, not only of peritonitis, but of purulent absorption. The sloughing was not completed until the twentieth day after the operation, when the remnant of the stump was not larger than a cherry, and was retracted within a deep depression, looking like the umbilicus of a newly-born child." It is not every case in which this can be done, because of the shortness of the peduncle.

We do not know as Spencer Wells claims priority in this method of dressing the stump, nor when his first operation of this kind was performed. This method of dressing the stump of the pedicle, so that the discharges shall fall outside the abdominal cavity, is spoken of as Wells' method; but in reported operations by Spencer Wells, made three years ago, this plan is not spoken of. So far as we know, the late

lamented Prof. Ackley, of Cleveland, Ohio, was the first to operate in this manner. In 1855 he thus operated, and Professor John Delamater speaks of the case as follows: "The doctor *conceived* the idea, that if he could place the stump of the ovarian pedicle in such a position that the slough would fall outside of the peritoneal cavity, he should avoid one source of after-accident. He therefore, in dressing the wound, drew the stump of the pedicle through the internal portion of the wound, fixing it in that position, by fixing the ligature by which it was surrounded in a state of tension sufficient to hold the stump in that position." The manner of fastening the pedicle by the *ligature* was probably an error in Dr. Ackley's case. The patient died from internal hæmorrhage, and the Doctor supposed the strain upon the ligature caused it to ulcerate through the pedicle too rapidly, and before the permanent closure of the artery. As the patient died on the third day, we think it is more probable that it slipped off, because of the shrinking of the pedicle and the strain upon the ligature.

About the same time, or perhaps a little later, Prof. Ackley attempted to cure a case without extirpating. "He made an incision through the abdominal parietes into the sac, through which he introduced a tube, which was confined in place for the double purpose of giving vent to all matters poured into, and also to induce suppuration and granulation of, the sac. This case also terminated fatally, though not very suddenly." We have been the more particular to claim originality, in regard to fastening the stump of the pedicle outside of the peritoneal cavity, for Prof. Ackley, because he was our friend and instructor, and he was too modest and retiring to claim anything for himself.

In the *Lancet and Observer*, for January, Prof. E. S. Cooper, of San Francisco, reports a successful case of ovariotomy. This is his third operation and first recovery. He thinks one of his former cases might have recovered had effectual means been taken to prevent hæmorrhage. In this case, the successful one, he transfixed the pedicle at various points with a needle, armed with a strong ligature, which was then drawn tightly and tied. Statistics show that full one-fourth of all the unsuccessful operations have terminated in death throug hæhmorrhage. It has, doubtless, been the cause of death in many cases where it was not suspected. These facts show the importance of due attention to its ligation. Dr. J. T. Bradford, of Kentucky, says, that portion of the pedicle which is composed of the ligament of the ovary is very elastic, and *in its subsequent retraction is*

*apt to slip through the ligature.* From this cause, he thinks, many cases of hæmorrhage arise. This will constitute another good reason for securing the stump of the pedicle where it can be seen, in all cases where it can be done.

A new method of treating ovarian dropsy has lately been practiced in London, less dangerous to life, and yet perhaps not less often successful, that it may not be inappropriate to refer to here. In the American edition of the *London Lancet*, for January, Dr. Baker Brown reports three cases cured by *tapping and pressure.* The pressure is made by means of pads and flannel bandages, applied as tightly as they can be borne. The February number of the journal just referred to, which, at this writing, has just come to hand, contains the report of another successful case. The operation was performed and the report made by Emanuel May. He acknowledges his indebtedness to Baker Brown for the suggestion. The cure remained complete for four years, when he lost sight of the case.

*Aletris Farinosa.*—In the *N. A. Medico-Chirurgical Review*, for January, Dr. J. P. Dromgoole has an article upon this subject. He thinks the *Helonia dioicia, star-wort* or *false unicorn-root*, has been too much neglected in medicine. Of its action he says, "It is emmenagogue, tonic, alterant, and slightly stimulating." . . . . "I have used it successfully in the treatment of amenorrhœa, dysmenorrhœa, leucorrhœa, hysteria, chlorosis, and other diseases connected with the organs of gestation, and have found it to be the most effectual remedy I have as yet employed." . . . . "Cases of amenorrhœa of several months' or years' standing, which have baffled the skill of eminent physicians, and failed to yield to all known remedies, have proved perfectly tractable upon a free use of star-root. For all female irregularities, I find it to be unsurpassed in its certain and efficient effects." . . . . "If the patient be pregnant, or if there be considerable uterine engorgement, I consider the star-root contra-indicated." Fluid extracts of this remedy are prepared by Tilden & Co., also by Thayer & Co. Keith & Co. prepare from the root a principle called *Lelonin*, and recommend it as a uterine tonic, and well adapted "to relieve a tendency to repeated and successive miscarriages."

*Diphtheria.*—The subject of diphtheria receives more than usual attention in the journals for January, of which the present article is a *summary.* Risking the charge of repetition, we shall endeavor to give, in as few words as possible, the practical import of the papers that have come under observation. In the *Maryland and Virginia Medical Journal*, for the month above indicated, Dr. R. W. I'Anson has

an article on this subject. In the treatment, he recommends, first, an emetic of salt and water, or ipecacuanha, to be repeated as occasion may require, to clear the throat. After the emesis, he would move the bowels with oil and turpentine, and subsequently keep them open with rhubarb, should medicine be required for this end. "A stimulating and supporting plan of treatment should now be adopted, such as camphor and quinine—1 to 5 grains each." . . . "Capsicum, used in combination with the powder of camphor and quinine, will be found an excellent remedy." In cases complicated with pneumonia, "the main reliance must be placed in *repeated* blistering, both in front and behind the chest. At this stage great advantage will be derived from the use of spirits of turpentine, together with stimulating expectorants, as decoction of seneca and syrup of squills."

As local remedies, he recommends nitrate of silver, 20 gr. to the ounce of water, to be applied only once a day. He mentions a variety of gargles, but none of these, he thinks, should be used more than three times a day. We have ordered a saturated solution of common salt to be thus used, and to be repeated every hour or two, with decided relief. It clears the mouth and throat of the adhesive and nauseous secretion better than anything else we have tried. After the removal of the diphtheritic membrane with a strong solution of nitrate of silver, the salt and water, thus applied, will prevent any extensive subsequent formation. In pneumonic complications, he would advise mercury until the gums become tender.

He says he has treated over thirty cases, with but two deaths. We should consider the mercurials objectionable, but then his experience is satisfactory. He says nothing of whiskey as a stimulant. In our experience, as has been stated in former *Summaries*, we have regarded it of the first importance. In about twenty cases, we have had two deaths, and both of these refused the stimulant. All the others expressed a confidence that the milk punch or egg-nog was staying them up against the excessive feeling of prostration.

In the *Berkshire Medical Journal*, for January, Prof. Wm. H. Thayer has an article, of thirty-eight pages, upon this subject. He shows a thorough acquaintance with the literature of diphtheria, and enters quite fully into its history. We shall deal only with his treatment, which is not dissimilar from that previously advised by other writers. He says, "Diphtheria is clearly not a self-limited disease; and in order to make treatment effectual, it must be begun at an early period." Of local means, he gives his preference to the

nitrate of silver, and that in nearly or quite full strength. "I prefer to apply the stick to the exudation, and a solution of 2 dr. to 1 oz. to the surrounding mucous membrane for the early applications, to be omitted or diminished as the disease begins to yield." A variety of chlorinated mixtures are spoken of, as adapted to the milder cases, or the convalescing stages. Of general treatment, muriated tincture of iron, chlorate of potash, quinine, turpentine, and alcoholic stimulants, are recommended. "Chlorate of potash has an advantage over the tincture of the sesquichloride of iron, as an alkali—in its resolvent effect on the fibrin of the blood, and hence a probability of its diminishing and arresting the exudation. In our experience, this statement has hardly been borne out. We think we have seen the most positive results from the tincture of iron. "Besides quinine, chlorine, or turpentine, diphtheria requires alcoholic stimulants. The flagging powers of life need frequently repeated excitants to sustain them against the steadily depressing influence of the disease." These, he thinks, can usually be commenced with as early as the second or third day. We have frequently commenced with them on the first manifestation of the disease, and are confident that we have seen those severe neuralgic pains, so common in the outset, yield to a full dose of hot sling. The absence of surface heat he regards as an indication for the commencement of the stimulant, and adds, "but we might, without hesitation, say that the presence of the disease is alone a sufficient indication."

In one regard Prof. Thayer and Dr. I'Anson are at variance. Prof. Thayer says, "I cannot avoid thinking it especially ill-judged to mercurialize a patient—if wise at any stage—at the somewhat advanced period at which the croupal symptoms usually appear in diphtheria, as the peculiar adynamic condition also is approaching, if not already begun, which must be hastened and aggravated by a mercurial course." As in typhoid fever, so in diphtheria, he thinks a tongue dry and black requires *turpentine*, and not calomel. We have used the turpentine in about half of our cases, in all that were protracted, and at any time gave a dry and red, or black tongue, and always with an evidence of improvement.

In an article of twenty pages upon diphtheria, by Dr. C. H. Cleveland, the subject is discussed with some novel views. As his treatment is somewhat different from any previously given, we subjoin it in substance. Dr. Cleveland thinks *alkalies* are of the first importance, and recommends the *bi-carbonate of soda*, to be given in from *one* to *ten* grains, according to the age of the patient, every half hour,

or every hour. As a local application, he prefers a strong solution of common salt. We make one quotation: "A gargle, composed of a very strong solution of common table salt, if the pellicle is not yet formed, will produce an osmotic flow of fluids through the epithelium, and thus cause the fauces and throat to be too moist to allow a pellicle to be formed. If taken early in the attack, repeated very often, at the same time that plenty of soda is taken internally, most cases of diphtheria will pass off without any appearance of the membranous exudation. Without doubt, by thus preventing the formation of a pellicle, many cases of genuine diphtheria have been made to remain so mild in their action, that even closely observant physicians have been led to suppose the disease was simply an ordinary pharyngitis."

In the *Nashville Journal of Medicine and Surgery*, for January, Dr. J. C. Calhoon has a short article upon this subject. He says that last fall the disease prevailed in an aggravated form. The first few cases he treated "in the usual manner, with alterative doses of mercury, an occasional emetic, and nitrate of silver to the throat," and all died. (Dr. Calhoon should know this is not the usual treatment.) "But since we have adopted the following treatment, not a single case has terminated fatally, so far as I have heard:

R.—Two table-spoonsful of fresh tar.
The yolk of an egg.

S. Spread on a piece of coarse cloth, cover it with a piece of old muslin, and apply to the throat. This plaster should be removed once in eight hours. If the subject is an adult, direct him to use a strong decoction of cayenne as a gargle, every two hours. For children a weaker decoction should be used, and applied to the throat with a mop. This, together with keeping the bowels in a soluble condition, will as certainly cure diphtheria, as quinine will arrest intermittent fever. The efficiency of the above treatment has become so generally known in this locality, that physicians are seldom called to diphtheria patients."

This statement, in our judgment, is quite too sweeping. We are not prepared to believe that an external application to the throat will cure a constitutional disease, of the severity which diphtheria frequently assumes, *with that certainty with which quinine will cure an ague!*

In the *Medical and Surgical Reporter*, for January 5th and 12th, Dr. W. Pepper has lectures upon diphtheria. We subjoin the more important points of treatment. "I am in the habit of prescribing the muriated tincture of iron, in fifteen-drop doses, four or five times a day, and sulphate of quinia in doses, so that five or six grains shall be

taken in the course of the twenty-four hours. At the same time, to sustain the strength, I give wine and water, wine whey and porter, and when necessary, from the great prostration present, I employ the oil of turpentine, the same as in cases of enteric (typhoid) fever. In regard to the use of mercury, he thinks there are some cases of a sthenic character that may be benefited by the use of mercury, under certain conditions; but in adynamic cases, he thinks there is no doubt of its impropriety. He also uses the chlorate of potash. As to local remedies, he thinks powdered alum, or borax and sugar, preferable to nitrate of silver in substance. He thinks there are many cases the local symptoms of which might have remained mild, but for *an aggravation* by the use of the nitrate of silver. He occasionally uses the nitrate of silver, but in *weak solution*—under twenty grains to the ounce. Where emetics are indicated, he prefers alum with ipecacuanha.

In the *St. Louis Medical and Surgical Journal*, for January, Dr. S. T. Newman has an article upon diphtheria. He concludes his paper with a letter from Dr. J. W. Bright, of Lexington, Ky., in which a slight modification from the ordinary treatment is advised. Dr. Bright commences the treatment with a gentle purgative, and afterwards the bowels are kept soluble by means of oil and turpentine. The membranous exudation he removes with a fine sponge, and applies a solution of nitrate of silver, 40 grs. to the ℥j., or the sulphate of copper, ʒj. to ℥j. of water, once a day. For general treatment: "I give the muriate of ammonia in full doses, say, to a child eight years old and upward, 10 grains every two hours, (in solution,) and ten drops of the sesquichloride of iron in the intermediate hours; and these are not to be omitted for thirty-six hours; then rest four or five hours, and give them again in like manner. Continue this treatment for four or five days, according to circumstances." * * * "The cure should be completed by the use of tonics; I have found beeberine the best. Diet nourishing. I have treated three hundred and thirty-four cases after this method, *without the loss of one.*" The result is quite satisfactory.

In the *American Medical Times*, for January 19th, Dr. E. W. Spafford has a short article upon the treatment of diphtheria. He says, "I have lost none to whom I was called within forty-eight hours after the attack. My first business is (if it has not been done) to relieve the stomach and bowels of their morbid contents by the use of a gentle carthartic; apply *tr. iodine* to the neck, three times per day, and with a sponge probang, alternately apply a solution of chlorate of potash and nitrate of silver to the ulcers in the throat; sponge the body with

diluted nitro-muriatic acid; give gum-water, beef-tea, wine, quinine, and iron, as the case may require. Tonics are indispensable. If neglected or too sparingly used, alarming debility may ensue, the surface of the body become colorless, muscular power in a very short time lost, and the patient soon ceases to breathe.

"I have been much gratified at the beneficial results growing out of the use of *nitro-muriatic acid* to the surface. It not only acts as a counter-irritant, but as a tonic. Where I have had opportunity to use it early in the disease, I have not witnessed the debility, the flabby, soft condition of the muscles, or colliquative sweats, which so often lead us to an unfavorable prognosis."

In the *American Medical Times*, for January 26th, Dr. Jonathan Kneeland has an article upon this subject. In Onondaga and vicinity diphtheria has prevailed somewhat as an epidemic since July last. About *eighty* cases have occurred, and *ten* deaths. Of these eighty cases, Dr. Kneeland has treated seventeen, all of which recovered. We shall make a few extracts from his treatment, and thus give what is peculiar. "In giving briefly the treatment I found most successful, I would claim no other merit but that of having somewhat early learned that we must at the onset sustain our patients by specific constitutional remedies, and not rely too much on local treatment."

The bowels were first emptied, in Dr. Kneeland's course, and then the patient put directly upon the chlorine mixture:

"R.—Chlorate of potash, ℥ij.
Hydrochloric acid, (dil.) ℥ij.
Water, ℥viij.

sweetened to the taste, giving from a dessert-spoonful to a large spoonful, according to the age of the patient." To this a small amount of morphine was added in some cases; and if muriated tincture of iron was considered advisable, it was given in connection with this mixture, in which connection he thinks it is better borne than when given alone. Quinine, in large doses, he considers all-important: "In no disease have I seen quinine so well borne." Like almost every observer, Dr. Kneeland found "good broths and food of easy assimilative capacity are of essential service." He says, "I have found nitro-muriatic acid, (equal parts of each acid,) given in doses of six or eight drops in water, and taken after food, well borne in some patients, who did not bear either the iron or chlorine mixture well." * * * "Alcoholic drinks in aid of quinine, general stimulants and nourishing broths, seemed useful in some cases. But in some, we found that the free use of 'good sound cider,' as the farmers call it, agreed better than ardent

spirits." We have more confidence in appropriate stimulants than anything else in diphtheria. Upon this subject we have frequently expressed our opinion. A few days since, a gentleman called upon us for advice, in regard to a sore throat and general prostration of the system. On examination, we found the fauces soft, palate and roof of the mouth presenting that erysipelatous redness peculiar to the first stage of diphtheria. His business was such as to render it important that he should keep about. I advised him to use all the rye whiskey he could and not become intoxicated; also to use a saturated solution of the chlorate of potash, as a mouth wash and gargle to the throat. We should have said that his tongue was swollen, so as to leave the prints of every tooth upon it, and was heavily furred, and ulcerations had appeared at various points. My directions were adhered to; a pint and a half of whiskey was used daily, and the patient recovered without taking his bed at all. In regard to hard cider, we have seen many cases of typhoid fever, in which this stimulant has been almost irresistibly craved; in such cases, we have always gratified the desire, and good has always resulted from it.

As an article of diet, Dr. Kneeland recommends the following: "As an article of diet, remedial, and yet palatable, I would recommend, where they can be obtained, sour-baked apples, mixing the tender pulp with sugar, or giving them alone, if the patient so prefers them. For many years I have used apples in this way as *the diet par excellence* in scarlatina; and how many grateful little ones, nauseated with pap, porridge, and panada, have risen up to call me blessed, for the grateful change to the apple diet!"

As a local treatment, he has no very high opinion of nitrate of silver: "To prevent the secretion from forming after removal, (as it often does,) I would use tannin and dried alum, applied with a soft linen rag, or on the moistened finger, to parts within reach, and blown into the throat through an ivory or glass tube; or two or three quills introduced into each other answer a good purpose; no harm follows inhaling this powder, as a short paroxysm of cough clears all out again."

The pulverized burnt alum we first saw recommended in the *N. O. Medical and Surgical Journal*, by Dr. Bigelow, then of Paris. We have used it often, and with satisfactory results. We prefer it to nitrate of silver. "For a gargle, the following is my preference, after trying a variety:

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|---|---|
| R.—Hyd. chlo. ammoniæ, | ℥ij. |
| Sodæ muriat., | ℥iv. |
| Pulv. capsici, | ℥ij. |
| Vinegar, | ℥ij. |

Add one and a half pints hot water; cool, and use freely. If any is swallowed, no harm follows." * * * "I apply externally over the throat salt pork, moistened with turpentine, and quickened with pulv. sem. sinapis, or capsicum, if need be."

The views of Dr. Kneeland, in regard to treatment, correspond very well with our own; we conclude with his concluding paragraph in regard to its nature: "From what I can gather from the recorded or narrated experience of others, and my own knowledge of the disease as gleaned from a limited number of cases, I have concluded that diphtheria is a blood-changing disease, and that lesion of function in the spinal nerves occurs early in grave cases; that we must not wait for sinking, but, if possible, *anticipate and prevent it;* and, finally, that to *oxygenate the blood*, and rouse and vitalize the nervous system, are the leading indications to be sought."

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## MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By Dr. L. Elsberg.

20. *A New Test for Alcohol.* By Ludger Lallemand, &c. (Du Rôle de l'Alcool et des Anesthésiques dans l'Organisme; Recherches Expérimentales. Paris, 1860; London Medical Times and Gazette, Jan. 12 and 26, 1861.)
21. *Rôle of Alcohol in the Animal Economy.* By Ludger Lallemand, Maurice Perrin, and J. L. P. Duroy. (Ibid., Review in Med. Times and Gazette, Jan. 12, 1861.)
22. *On Anæsthetics and Artificial Respiration in Apparent Death from Chloroform.* By same authors. (Ibid.)
23. *Why the Umbilical Cord Contracts.* By R. Virchow. (Cellular Pathology; Berlin, 1860; London, 1861.)
24. *An Instance of Laceration of the Lung without Injury to the Ribs.* By Dr. Comolli Giovanni. (Annali Omodei, Vol. CLXXI., p. 14.)
25. *On the Penetrability of a Layer of Oil by Atmospheric Oxygen.* By A. Vogel and C. Reischauer. (Froriep's Notizen aus dem Gebiete der Natur und Heilkunde, 1860, IV., No. 13.)
26. *The Best and Cheapest Sinapism.* By Robert Froriep. (Froriep's Notizen, 1860, IV., No. 17.)
27. *Antidotes for Phosphorus Poisoning.* By H. Schuchardt. (Casper's Vierteljahrsschrift, XVIII., 2.)
28. *Calomel for the Removal of Insects from Sores.* By Thomas Atkinson, M.D. (Dublin Medical Press, Jan. 16, 1861.)
29. *The Permanent or Prolonged Local Warm-Water Bath a Cure for Ingrown Toe-Nail.* By Dr. Eduard Zeis. (Die permanenten oder prolongirten Localbäder bei verschiedenen örtlichen Krankheiten. Leipzig and Heidelberg, *Winter*, 8vo, 1861.)

30. *The Uterine Douche as a Remedial Agent in Cases of Galactorrhœa.* By DR. ABEGG. (Monatsschrift für Gebrtuskunde und Frauenkrankheiten, December, 1860.)

31. *Anacahuite Wood, a Reputed Remedy for Consumption.* By DANIEL HANBURY. (London Pharmaceutical Journal, February, 1861.)

20. The vapor of alcohol reduces a solution of chromic acid to the green oxide. To detect alcohol in the breath or perspiration, it is necessary only to breathe, or pass the vapor from the skin, through a drachm of the solution of 1 part of bichromate of potassa in 300 parts of strong sulphuric acid. Dr. E. Smith has recently shown before the Medical Society of London and the Society of Arts, that by inclosing the arm of a man in a caoutchouc bag, through which a current of air is made to pass, the presence of alcohol may be detected at the end of one, two, three, and four hours after alcohol has been taken, and doubtless, too, for a much longer period. It is best shown in those who perspire freely.

21. Liebig's dictum, "Alcohol stands high as a respiratory material—its use enables us to dispense with the starch and sugar of our food, and is irreconcilable with that of fat," is, at last, assailed. The authors' experiments prove that alcohol is *not* one of those alimentary substances which undergo oxydation; but that, remaining in the blood a certain time, it is eliminated by the lungs, skin, and kidneys, totally and entirely as alcohol, with the exception of a very small quantity acidified in the stomach.

22. Alcohol, chloroform, ether, and amylene have a primary and special effect on the brain and spinal cord. They accumulate there. They abolish the sensibility of those parts to mechanical irritation, though not to electricity. Carbonic acid and carbonic oxide, on the contrary, stupefy by direct alteration of the blood; and the nervous centres retain some sensibility to mechanical irritation as long as life lasts. This is a marked and important distinction.

Our authors reject sedation and paralysis of the heart as causes of death in animals under chloroform, and state that life may always be saved if artificial respiration be begun even after the heart has ceased to beat. There is no true *asphyxia*, or disturbance of blood-change, as there is after inhalation of the two carbonic gases, but cessation of breathing, merely because of the narcotism of the medulla oblongata. Artificial respiration saves life by stimulating the pulmonary mucous membrane, by setting the heart in motion through reflex influence, and by allowing the blood charged with chloroform to part with some of it to the fresh gaseous current introduced. But so that the respiratory

movements be set going, it does not matter at all with what gas the lungs are filled during the first few inspirations. Nitrogen or hydrogen is as good as atmospheric air, *and oxygen inhalations are worthless;* the great point is to excite the act of breathing with sufficient energy, so as to stir the heart and devaporize the blood.

23. In a transverse section of the umbilical cord, it may be observed, that the thick middle coat of the vessels is entirely composed of smooth muscular fibres, lying in immediate contact one with the other, and in such abundance as is scarcely to be seen in any completely developed vessel. This peculiarity explains the extraordinarily great contractility of the umbilical vessels, which can so readily be seen in action on a large scale when mechanical stimuli are applied, when the vessels are divided with scissors or are pinched, or after the employment of electrical stimuli. Sometimes, upon the application of external stimuli, they even contract to such a degree that their canal is entirely closed; and thus, after birth, even without the application of the ligature, as when, for example, the umbilical cord has been torn asunder, the bleeding may stop of itself.

24. The wheel of a carriage passed over the chest of a lad, æt. 15 years, without fracturing any of the ribs. He died on the tenth day, of pneumonia, notwithstanding energetic antiphlogistic treatment. At the autopsy no fracture could be detected, but air escaped on opening the thorax, which contained also much fluid. The left lung, filling only a fifth of the cavity, adhered to the parietes, and a laceration was found at the anterior edge of the middle and upper lobes, accompanied by a loss of substance, as well as by an aperture in the pleura. The laceration was about an inch in diameter, and was surrounded by a fragile tissue, infiltrated with pus.

25. It is well known that water evaporates, in spite of a covering layer of oil, though, of course, more slowly. Experiments have now been made to prove that the oxygen of the air penetrates a layer of oil, also, to reach a liquid beneath. Thus, a reduced solution of indigo was oxydized, after some time. By using a solution of oxide of iron, and afterwards determining the character of the peroxide, the accession of oxygen was determined quantitatively. It was also seen that different oils possess the property of allowing oxygen to pass through in different degrees.

26. "Spirit of mustard" is prepared by mixing a drop of the volatile oil with a drachm of water. A piece of blotting-paper moistened with this solution, applied to the skin and covered with oiled silk and a bandage, is the best, most effectual, cleanest, and cheapest

form of a sinapism. The mixture should be prepared fresh every time it is used. It causes a burning sensation at once, which increases for ten minutes, and disappears in half an hour, without vesicating or producing any other troublesome consequences, even if it be not removed. A vivid reddening of the skin is the only consequence. This form of the rubefacient is preferable to the common mustard plaster, because it acts far more certain, is prepared more easily, and is more cleanly.

27. In cases of poisoning by phosphorus, we have to combat the primary, irritant effect on the stomach, and the secondary on the whole body, blood and nerves. Against the first, magnesia, oil, and other means have been formerly recommended, but they do more harm than good. The phosphorus in the stomach should be sought to be converted into acid, for which purpose the domestic vinegar may be employed. Dilution by large ingestion of water with mucilaginous drinks, or mixed with a little milk, but *no oil*, and emesis, f. i. by tartarized antimony, are also indicated. To counteract the secondary or chronic toxical effects, it is still necessary to oxydize the phosphorus that has passed into the blood, as also to neutralize the phosphoric acid thus formed, at the same time that the paralyzed energy of the heart, blood-vessels, and nerves requires stimulation: acids with ammonium, especially spirits mindereri, in large quantities, will answer here best. Finally, it is also necessary to promote the excretion, of the phosphoric acid and phosphate of ammonia formed, by the urine.

28. A little calomel strewed over the part, or blown into the wound from the end of a quill, will immediately rid the patient of the troublesome maggots sometimes met with in sores.

29. Dr. Zeis most strongly recommends the local water-bath, permanent or prolonged, in many of the most troublesome local affections, claiming to have obtained most beneficial results from its use. In ingrown toe-nail, he urges the immersion either constantly for some time in warm water, or at least with short intervals for from four to six or eight weeks, which he says at once relieves the patient from all pain; the inflammation subsides, and the nail grows quicker, and normally.

30. It has been proved that excitation of the mammary nerves induces contractions of the uterus, and that excitation of the uterine nerves makes a decided impression upon the nerves of the mammary gland. Dr. Abegg has successfully applied the principle involved, in the treatment of most obstinate cases of galactorrhœa, which yielded

to the warm uterine douche, of about 100 F., employed for fifteen minutes every evening, for from a week to eleven days. A catamenial flow was induced, and the galactorrhœa checked. Dr. A. concludes: "Further observations will teach whether this intimate connection between uterus and mammæ can be therapeutically made use of only in the rare cases of galactorrhœa, or perhaps also in other chronic diseases of these organs, by inducing increased innervation and congestion in the one, in order to remove the same, abnormally existing in the other, or the consequences thereof."

31. "Anacahuite wood is administered in the simple form of infusion, shavings of the wood, previously deprived of its bark, being treated with boiling water, as in the preparation of tea. The infusion is drunk in the morning, fasting, and again in the evening, at bedtime. In cases where the disease has already made considerable progress, the infusion may be used as often as the patient is inclined to drink."

[This extract, a translation from the *Archiv der Pharmacie*, we insert, that our readers may be somewhat informed as to the latest "remedy for consumption." Whether it really possesses any of the virtues ascribed to it, ("spitting of blood is removed in a few days," etc., etc.,) the future must prove. It is at present extensively tried by the profession in Europe, especially in Germany.—L. E.]

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## REVIEWS AND BIBLIOGRAPHY.

*The Transactions of the American Medical Association.* Vol. XIII. 1860. Pp. 930.

The papers of this volume, which, in its appearance, is the same with its predecessors of the last few years, are thirteen in number, and we proceed to consider them separately or in groups, as may best accord with their subjects and our limits.

Commencing with the first in order, which is the address of the retiring President, Dr. Henry Miller, we find that its topic is Medical Education, a subject which can scarcely be called new to the Association, or to the profession generally. With this, we group the report of the Standing Committee on Medical Education, written by Dr. Reese, of New York, the chairman of that committee. Both of these occupy some forty pages of the volume, and we cannot comprehend the advantage of repeating in Dr. Reese's words what has been better said by Dr. Miller. This is more especially the case when we notice

that a good portion of the more valuable parts of the committee's report consists of extracts from the report of a former committee on the same subject, and were long since printed in the Transactions of the Society. Do committees on medical education revolve in cycles of eleven years? If so, it may be economy for the Association to stereotype those reports, and thus save themselves the expense of resetting their type. We are inclined to think the period of revolution is even more brief. Certainly, almost the same ideas have been repeated every year. We do not feel at all called upon to discuss the resolutions appended to the report, for where they suggest any alterations they are of a character which renders them impracticable. Besides, if any one wishes to discuss them he can go to Chicago next June, and talk as long as the Association will listen to him. The ideas of the report and of the address are those with which we are familiar. The charge is, that our medical students are not sufficiently well versed in their profession to practice it, and that the only remedy is to "elevate the standard" of education. Our opinion has been heretofore freely expressed upon this subject, and we shall not now say more than this, that neither the lengthening of terms, nor the increase of the number of lectures, nor any of the panaceas proposed by the respected committees of the Association, have done, or can do, any good. The entire independence of our medical colleges of each other, especially when located in different States, and the absence of all sovereign control of the education of the profession similar to that of the French empire, lie at the bottom of all the failures of the committees to produce any effect; a failure which the President of the Association fully acknowledges. And this must continue to be the case unless some autocratic ruler hereafter swaying the destinies of our nation shall with much evil bring to us this one good.

One statement of the President we at once take up, and challenge its correctness. It is contained in this extract: "That there has been a great default in medical education within the last five-and-twenty years, it were useless to deny. The education of physicians has not kept pace with that of theologians, or even lawyers; and our profession has so far lost caste as scarcely to deserve to be ranked among the learned. I make this confession in no captious spirit, but with deep and painful mortification."

Now, is this so? Are medical men now less careful students or less successful practitioners than they were twenty-five years ago? Is our reputation abroad anywise inferior to what it was twenty-five years ago? Have we a smaller proportion of good surgeons, or of eminent

physicians, than we had then? To all these queries, the inevitable answer is a negative; and not only so, but we can safely assert, that never before did American medical knowledge stand in such high esteem in Europe as at this day; never before has there been so great activity of the medical men of our country in studying disease, in recording for the instruction of our successors the history of epidemics; never before have we had in our ranks so large a number of well-educated men; never before has the press brought out so many excellent professional works from the pens of our own writers. If we compare our position with that of the theologians or lawyers, we can match our inferior medical schools with double the number of inferior theological schools, and with at least school for school among the lawyers. We do not desire to cry peace, peace, when there is no peace, as Dr. Miller fears may be done. We would urge both private and public teachers to use their utmost diligence to make their pupils more thorough students, and more perfectly to qualify them for their professional life, to "elevate the standard" all they can. But we will not in silence listen to unfair comparisons between the young men of our own and other professions.

The paper next succeeding the President's Address is a Report on the Medical Topography and Epidemics of the State of New York, by Joseph M. Smith, M.D. It occupies almost two hundred pages, and is illustrated by a Map of the State, which gives the position of seventy-two meteorological stations within its limits. Taking it as a whole, it is a valuable contribution to the history of the epidemics of our country, and of the topography of the State of New York. Free use has been made in its compilation of the papers preserved in the various volumes of the Transactions of the Medical Society of the State of New York, thus giving an illustration of the value of these separate papers, sometimes very dull in themselves, and at the same time encouraging us to hope that hereafter it may be possible for some one to find out some of the obscure principles which control the course of epidemics by carefully studying these more extended reports to this Association.

In the same class we should rank the paper which follows next in the volume, entitled "A Report on the Medical Topography and Epidemics of North Carolina, by James H. Dickson, M.D. Its author is at a disadvantage as compared with the reports for New York, from the fact that his State Society has not accumulated so large a number of papers upon various local epidemics, and the usual difficulty in getting sufficiently minute information from busy practitioners has

been experienced by him. It is not so elaborate a paper, is not so systematic, and is less formal. Still, we incline to the opinion that it will be more acceptable to the profession at large, especially to the practical workers, for it not only describes the periods during which diseases have prevailed, their course and their duration, but is largely occupied with the symptoms characteristic of them, and the treatment which has been most successful. To the practitioners in this portion of our country it must continue to be a valuable paper. Certainly it does credit to its author, and is not unworthy of a place in the Transactions of the Association.

At the meeting of the Association, of which this volume is the fruit, the plan of dividing the members into sections, for the purpose of more carefully considering the papers brought before them, was adopted. The papers just spoken of, or abstracts of them, were read before the Section on Medical Topography and Epidemics. We now come to the papers read before the Surgical Section. The first is a "Report on the Various Surgical Operations for the Relief of Defective Vision," by Montrose A. Pallen, M.D., of St. Louis, Mo. It treats of anchyloblepharon, symblepharon, trichiasis, entropion, ectropion, and strabismus. It occupies about sixty pages, is very much the same that is said on these subjects by the recent works on the Surgery of the Eye, would make a very good appearance in a book on the subject, but is of no especial value here, and does not require any extended notice.

It is followed by a "Report on the Improvements in the Art and Science of Surgery in the last Fifty Years," by Joseph N. McDowell, M.D., of St. Louis, Mo., which is, to say the least, a queer paper, the title being about as appropriate to it as if it had been "concerning frogs." It begins with Galen and Ambrose Pare, touches on Bichat, John Hunter, Charles Bell, Astley Cooper, and John Abernethy, then comes down on pathologists in general, and Broussais and Andral in particular, all within the first six of its forty pages. The remainder contains some hard writing, some extracts from Gross' Surgery, (a part acknowledged, a part not,) some hints of a practical character, and some garrulity, making altogether such a combination as defies any review of it. Its closing sentences we quote for the edification of our readers. "In conclusion, I will add, that the obvious reason for the great success of American surgeons over the European is, that they follow less the dogmas of the schools, less the hyperborean (sic.) practice of European schools, and are more governed by reason and common sense, and operate on a people of better constitution.

"The glory of the French is to theorize and to operate, but with little care for the patient afterwards. The English and the German are less careless of life, and are more prudent in practice. If some of our American authors and teachers could not read French, or translate from the Dutch, and were less disposed to be led like an ape by a string, to the music of a Dutch or French hand-organ, we should justly expect improvement at home. But when men who claim to be Americans, and in positions in distinguished schools, will do justice to Americans, we may have emulation among ourselves; as it is at present, however, when anything that is either good or great is done by American surgeons, it is first denied in Europe, then claimed by them, and their claim admitted by us as just. 'Justice to our brethren, truthfulness and self-reliance,' should be our motto.

"American surgeons have proved themselves most successful in practice, as their living patients bear testimony. American teachers should feel that they are justified in the conclusion that they are most capable of giving instruction in their own country, to their own countrymen. Why should they be sent to Europe if they can be taught better on our own continent? Why should pupils go East if they can find surgery as well taught in the great West?"

We should say that comment on this is unnecessary, if not impossible.

The third paper from the Surgical Section is entitled a "Report on Morbus Coxarius, or Hip Disease, by Lewis A. Sayre, M.D.," in which there is noticeable a curious tautology. Did its writer think the learned members of the Association would not know what morbus coxarius is, if he did not give the more common term? We are reminded of the custom of a professional acquaintance, who always, in describing his treatment of a case, would give the common name for his remedies, repeating them in the more technical expression. The result was rather ludicrous.

This, however, is comparatively a small thing, especially since the paper is a very excellent one, in our opinion, by far the best one in the volume, if we consider directness, clearness, simplicity and truth, as desirable characteristics of such documents. The disease is so common, its treatment is so important a subject to every practitioner, that we shall dwell somewhat fully on the paper, presenting, in the first place, the following analysis of it:

1. The anatomy of the joint, in which there can, of course, be little that is new. Attention is called to the fact that the synovial membrane of this joint has a large surface which is as liable to inflame as any other similar structure. The author is of the opinion that many

cases of hip disease "commence as a pure synovitis, and should be treated on the same general principles as a synovitis of any other joint."

2. The *causes* of the disease are various—falls, blows, injuries, cold, or anything which may produce a synovitis of the joint. In a strumous subject this disease, if neglected, goes on to involve the cartilages and bones; that is, to coxalgia. Most writers state that morbus coxarius is a constitutional disease; "that it is essentially strumous in its origin and character." This doctrine has been taught for seventy-five years. Having been led to doubt this, especially from the fact that *local* treatment has been far more effectual than *constitutional* medication in curing the disease, Dr. S. endeavored to investigate the true causes, and found that most of his patients "were of a robust constitution previous to the commencement of their attacks, and their constitutions gave way only when their sufferings became so intense as to deprive them of their nightly rest and appetite, and to render them incapable of enjoying their accustomed out-door exercise." The effects had been mistaken for the causes.

3. There are *three stages* of the disease, which are marked by different symptoms. *First.* The inflammatory, the symptoms of which are frequently obscure, and are commonly referred to the knee—slight limping, imperfect flexion of the hip-joint—the sound knee can be carried to the chin, the diseased limb cannot; pressure of the head of the bone against the acetabulum produces pain; extension relieves the pain, unless the ligaments are ulcerated. *Second.* The stage of effusion, producing eversion of the limb, abduction and *apparent* elongation, flattening of the nates, and, if the effusion is excessive, *apparent* anchylosis.

*Third.* The stage in which the capsular ligament is ruptured, the contained fluid, whether serum or pus, or both, escapes; and there is *inversion*, *adduction* and *apparent* shortening. The fluid may escape by perforation of the acetabulum. Dr. March, in 1853, pointed out the error of the common notion that luxation occurs.

4. The *diagnosis*, as laid down by the author, presents nothing requiring special comment. In fact, it is itself a careful abstract, not permitting any further condensation. We must either give the whole or none.

5. The *treatment* of the *first stage* is local depletion by leeches or cups if necessary, and a relaxed condition of the bowels; rest of the joint, and relief of the pressure of the synovial surface, together with such constitutional treatment as each case may require. Issues in this stage are worse than useless; iodine may be of service. Permanent

extension, with motion of the joint, *is the great indication*, for which purpose the author proposes an instrument.

In the *second stage*, if the effusion is slight, moderate depletion locally, mild mercurials internally and externally, pressure by adhesive straps about the joint, and slight but permanent extension by weights while the patient is in bed, or by the author's instrument. If the inflammation of the joint is very acute, an active antiphlogistic treatment is necessary; and if effusion is considerable, it must be removed by punctures, either subcutaneously or with a trocar. In the third stage, if the fluid contained in the joint be of a plastic character, the author's instrument is all that is necessary, as recovery will take place with some motion of the joint. If caries has occurred, the proceeding is different. Exsection of the bone is thus indicated, the wound to be kept open till the disintegrating fragments are all discharged, and absolute rest of the joint, with moderate extension, by means of the "wire breeches," a serviceable limb being the result.

But this brief abstract must suffice. It will be noticed that there are several points of interest in the paper. First, as to the pathology of the disease—that it is *not* a strumous disease. Second, as to the result to be anticipated; not only the life of the patient spared, but recovery, with a useful joint and limb. Third, as to the means in the early stages, mechanical appliances to allow the patient to walk even, while the head of the bone is kept from rubbing upon the acetabulum by a system of elastic extension and counter-extension; in the third stage, removal of the carious head of the bone, by exsection. Several cases are reported to maintain the author's opinions, and in support of his doctrines with regard to exsection, he has presented a table containing a synopsis of one hundred and ten cases in which that operation was performed. Of these, *seventy-two* (nearly two-thirds) recovered, with a joint more or less useful, thirty-eight died, and two were unfavorable. Few of our readers will fail to be surprised at this statistical result.

The mechanical appliances for producing extension and counter-extension which shall be constant and yet allow the patient to go about, even to walk or run, seem to us to be as ingenious as anything which has been produced for many years in this department. It is to Dr. H. G. Davis, of New York, that we are indebted for the invention, and the attention of the readers of the MONTHLY has been repeatedly called to it. Any one who is not familiar with it, will find a description in the MONTHLY for April, 1860. It is at least five years since we first saw it on a patient, and it is difficult to say which was greater, our surprise to see a patient in the third stage of the disease

rolling his hoop in high glee, or our delight that surgery had again vindicated its claim as a progressive art.

It seems that Dr. Sayre did not grasp the idea of the value of the invention till later, but has made good use of it since 1859. We regret that he does not give the inventor a more just credit for it. Although he copies Dr. Davis' description of it, and with an illustrative cut, he modified it in several particulars, which do not affect a single principle of it, and then calls it *his own* (my) instrument. Now we *know* that Dr. S. is not the man to do injustice intentionally to a professional *confrère*, but we fear that the not unnatural enthusiasm for one's own devices often blinds us to the fact that they do not excel, though they may differ from others. As Dr. S. in his paper frankly acknowledges that he had been unable to *invent* an instrument that should accomplish the desired extension, while Dr. Davis' "answered the purpose admirably," we trust that he will take care that no occasion is given for the supposition that he intends to appropriate to himself the merit of another's labor.

(To be continued.)

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*An Elementary Treatise on Human Anatomy.* By JOSEPH LEIDY, M.D., Professor of Anatomy in the University of Pennsylvania, &c. With 392 Illustrations. Philadelphia: J. B. Lippincott & Co. 1861. 8vo. Pp. 663.

Truly a republic is the commonwealth of Science. Truly, the portals of her glorious temple are widely opened to whosoever will duly enter. Truly may the lowliest, earnest worshiper aspire to the sublimest priestship, attain the loftiest prominence, and wield the mightiest sceptre! The touch of the wand at which even the sepulchres of past ages give up their fabled dead is universal in its sway. Cheerfully and reverently are the master-minds crowned with bays of richest honor. Their researches imperishably infix their names upon their self-erected monuments. Such names become watch-words to patient, toilsome study, and are beacon-lights of scientific progress. Such a name every worker in science proudly recognizes in the simple, magnificent one—JOSEPH LEIDY.

It is not our present purpose to review Prof. Leidy's brilliant career; nor do more than refer in this connection to his eminence as an anatomist, microscopist, palæonthologist, or to his surpassing qualities as a lecturer, a demonstrator, or a teacher. Our task is limited to a notice of the book the title of which heads this article. We freely confess that we approached the examination of it confident of finding

merit of the highest order; prepossessed in its favor, from the known ability of its author. We at once regretted that the too elementary character of the work rendered it scarce worthy of the author's experience as a teacher and reputation as an anatomist. As we proceeded with the examination, this regret grew upon us; and we wish here to express our earnest hope before long to be able to record the publication of a complete systematic treatise on anatomy by the honored and able author.

Judged as a "first book of anatomy," the work before us, with its truly splendid illustrations, many of them original, is unsurpassable; and it would seem, after examining the work before us, to require no prophetic knowledge to predict its introduction as such in our schools and for private instruction, to the exclusion of all others. It would certainly argue want of discrimination, appreciation, or the influence of qualities or motives prejudicial to the interest of the learner, if it were not soon generally used. If the author had done no more than introduced his simplified, anglicized nomenclature, he has in this way alone removed so much of the difficulty experienced in the acquisition and retention of anatomical knowledge, that no learner who knows of its existence and could get it, would willingly do without it; but altogether, for its limits, in description and illustration, it has no equal in the language. True, the arrangement is not thoroughly and consistently systematic, but it is the most convenient and useful to the student. Keeping the object steadily in view, sufficient completeness in detail, embracing the whole subject of human anatomy, has been attained, with admirable conciseness, throughout; and though, as to diction, the hypercritical might collect a few instances of a faulty use of present participles and incorrect syntax, the style generally is remarkably perspicuous, and the anatomical descriptions, in every case, simple, clear, and faithful to nature, as they can be given only by one who has observed and taught much and well.

In paper, of superior quality and beautifully tinted, and typography, elegant and faultless, this volume excels everything before attempted by publishers of medical works in this country. The publishers and the author—in fact, all that have had anything to do with its "getting-up"—have combined to make "a magnificent book." L. E.

NOTE.—Owing to the number of papers on file, and the very great demand on our pages, we have been compelled, though very reluctantly, to cut down the analytical review, already postponed from month to month since December last, into the foregoing brief notice. In justice, we must add, that what we have presented is hardly more than the introductory and concluding passages of the lengthy and able article prepared for us by the reviewer.—EDITOR OF MONTHLY.

*Statistical Report on the Sickness and Mortality in the Army of the United States, compiled from the Records of the Surgeon-General's Office; Embracing a Period of Five Years, from Jan.*, 1855, *to Jan.*, 1860. By RICHARD H. COOLIDGE, M.D., Assistant Surgeon, U. S. A. Washington, 1860; pp. 515, 4to.

This is one of the few really valuable public documents that have appeared during the last year. It is generally admitted that the only reasons justifying the vast expenditure incurred by the government in printing *most* of the public documents, are, that government patronage is thus increased, members of Congress have opportunities of keeping themselves in good odor with pot-house politicians and frequenters of cross-road groceries. The documents are soon devoted to ignoble service as wrapping-paper, and the labor involved in their preparation is forgotten. Occasionally, however, science commands a little notice, and the public treasury contributes towards the publication of some of its contributious to the public good. The medical statistics of the army have been presented to the profession through the liberality of the government, in three volumes, embracing most interesting and valuable information, extending from the first organization of the *Army Medical Bureau*, down to the commencement of last year. Much credit is due to the Surgeon-General for his selection of one so well fitted to undertake the task of compiling the report, from the records of his office, as Dr. Coolidge. The medical officers of the army are a hard-working body of men, who, under circumstances frequently of the most adverse character, exhibit true love for their profession, and desire to add to the general fund of knowledge. These reports are fair exhibits of what they are doing in the direct line of duty, and are entitled to much respect from the profession at large.

The statistical report consists of tables, exhibiting the amount and ratio of sickness and mortality at the different posts occupied by our army. These are accompanied by extracts from the sanitary reports of the medical officers, which treat of the nature of the situation, special and general local causes of disease, methods of treatment that have been found serviceable, and general suggestions as to diet, regimen, &c., of the soldiers. Scientific subjects of interest outside of the profession, and facts in natural history, may also be found in these reports; showing that leisure hours are devoted to observations and investigations of general interest. It would be impossible to give any *résumé* of these. They are generally expressed in as few words as possible. As regards the treatment of disease, the reporters mention

plans very different, but this is no more than could be expected in a body of men stationed at points so essentially different in climatic characteristics.

The report would be made more generally useful if a full and complete index were prepared. The table of contents but enables the reader to find out the reports from different portions of the country, but does not give him any aid, should he wish to examine into the opinions of the medical officers, on the nature and treatment of particular diseases. We believe that an index, which would enable one to find subjects, would be a great addition to the valuable report. It is not only the statistical tables which the profession will value, but the contributions to practical medicine and science that are also comprised in the volume. L. H. S.

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## JOHN WAKEFIELD FRANCIS, M.D., LL.D., &c.

BORN NOVEMBER 17, 1789—DIED FEBRUARY 8, 1861.

[Eulogy read before the Medico-Chirurgical College, March 7, 1861, by Prof. A. K. GARDNER, M.D.]

Travelers in foreign lands, returning full of enthusiasm, have given us gorgeous descriptions of the snow-capped glories of Mont Blanc. The man of business and figures has told us of its wondrous height; the geologist has given us the dispositions of its trap and siennite, has laid out its water-courses, described the heavings and motions of its *mer de glace;* the farmer has wondered at its fertile fields, with its fruit-laden strawberry vines beside the everlasting ice; the botanist finds enthusiasm in the mosses and algæ of its rocky cliffs; the painter tells you of the sublimity of the view when the setting sun pours its resplendent rays upon its heaven-piercing peak ; the poet breathes out his immortal verse at its inspiration; the dreamer gazed and gazed,

> "Till the dilating soul, enrapt, transfused
> Into the mighty vision passing—there
> As in her natural form, swelled vast to heaven."

As the Swiss mountain in the physical world, so rose the snow-crowned head of the late Dr. John Wakefield Francis among his peers. Colossal, towering above the range of lofty intellects among which he stood—not comparatively great by isolation—many-sided, every person who knew him has formed of him an estimate more or less varied in accordance with his powers of observation, the density of the atmos-

phere through which he gazed, and the clearness of vision to which he attained, whether seeing only the exterior man, or after gaining access to the intimacy which enabled him to feel that great heart pulsating ardently for every noble aim, and every enterprise where the good of our common humanity was to be subserved.

The speaker of to-day for years gazed from afar upon the rugged lineaments of this hoar apostle of medicine; later was warmed into new life by the radiant sunshine ever playing around his genial front, daily feeling ever-renewed evidences of that interior warmth which melted the thin outhanging ice-crusts, producing beauty, and life, and joy in its path. He has seen the interior man, noted the inexhaustible stores of native and acquired intellectual wealth, the kind heart, the generous hand. He must fail in attempting to portray them. If he can but catch the, alas! already vanished picture of one side of this huge polygonal and daguerreotype it for your observation, he will be content; leaving to those of more extended grasp to seize the whole man, and instead of the simple picture which is now to be presented to you, shall carve out a colossal statue, wanting but the Promethean spark, to be the very form and figure of him whose like we shall never look upon again.

### BIRTH AND PARENTAGE.

John Wakefield Francis was born in the City of New York, November 17th, 1789. His father, Melchior Francis, was a native of Nuremburg, Germany, who came to this country shortly after the establishment of the American Independence. He followed the business of a grocer, in the neighborhood of Pearl and Fulton Streets, where the doctor was born, and was distinguished for integrity and enterprise. He fell a victim to yellow fever. Dr. Francis' mother was from Philadelphia. Her maiden name was Sommers, of a family originally from Berne, in Switzerland. It was one of the favorite historical reminiscences of her son, that she remembered when those spirits of the Revolution, Franklin, Paine, and Rush, passed her door on their daily associations, that the children in the neighborhood would cry out, "There go Poor Richard, Common Sense, and the Doctor."

Those familiar with our deceased friend well remember the bursts of enthusiasm with which he ever greeted the mention of the name of Franklin, and particularly that ebullition of feeling and oratorical expressions, when, after his return from the annual meeting of the American Medical Association in 1849, in Philadelphia, he described his visit with Drs. V. Mott and R. H. Kissam to the quiet and unostentatious

grave of this great patriot and sage. It was with him a pleasing fancy, that in personal appearance he bore a considerable resemblance to one whom he so reverenced, and who, like him, had commenced life at the printer's galley, earning his daily bread setting type and handling the composing-stick. Thus this association is not merely a matter of fancy, for in early youth Francis was apprenticed to the trade of a printer, in the office of the strong-minded, intelligent, and ever-industrious George Long, at that time a prominent bookseller and publisher. In after years he related the anecdote of the hours stolen by the young Francis from meal-time and recreation, as, sitting under his frame, he partook of a frugal apple and cracker, at the same time eagerly conning a Latin grammar. Even at this date he was one of the few subscribers to the slowly issuing English edition of Rees's Cyclopædia, to which he afterwards contributed valuable articles, to the benefit of the work and markedly to his own literary reputation.

The love of letters was, however, not limited to mere type; but, ambitious of higher duties and occupations, by the kindness of his master his indentures were canceled, that he might pursue the career to which his taste urged him, and which, fortunately, the easy circumstances of his then widowed mother rendered feasible, and he fitted himself for college under the charge of the learned preceptors, Rev. George Strebeck, and the classical Rev. John Conroy, of Trinity, Dublin. He was thus enabled to enter an advanced class of Columbia College, graduating in 1809, receiving his degree of A.M. in 1812.

In 1807, while yet an undergraduate, he entered the office of the renowned Dr. Hosack, then in the prime of life and height of metropolitan reputation. The remarkable assiduity, zeal, and untiring perseverance, which his later cotemporaries have noted with wonder, may be seen to be characteristic of the man, and no occasional freak or exception, stimulated by a peculiar and remarkable ambition. Dr. Hosack gave his warm approbation to this assiduous devotion, and stated that, "during the period of his professional studies for four collegiate years, he never absented himself from a single lecture, nor attended one without making notes or abstracts on the subject taught by the lecturer." "What an example is this," well says Allibone's very valuable Dictionary of American Authors, "to the students of the present day, and how great has been the reward in large stores of professional erudition, in public esteem, and national reputation, for the hours thus devoted to the acquisition of useful knowledge!"

In 1811 Dr. Francis received his degree of M.D., from the Col-

lege of Physicians and Surgeons, which had been established in 1807, under the presidency of Dr. Romaine, and which had been reorganized, with Dr. Bard at his head. Francis's name was the first recorded on the list of graduates of the new institution. His thesis upon the *use of mercury* was afterwards published in the *Medical and Philosophical Register*, and gained the author much reputation. It was full of medical research, and was the pioneer of the long train of writings and labors which has given so much eclat to his name.

With his professor, Dr. Hosack, he was much esteemed, who immediately proposed a medical copartnership, which flattering testimonial to his talents and acquirements was, of course, accepted, and continued till 1820; and the fruits of which were not limited to his profession, but their names were united in many schemes for literary and social improvements.

In compliment to his acquirements, Dr. Francis was appointed, in 1813, Professor of the Institutes of Medicine and Materia Medica, when the medical faculty of Columbia College and of the College of Physicians and Surgeons were united; and shortly after his popularity with the students gained him the position of President of the Medico-Chirurgical Society, in which he succeeded his friend, Dr. McNevin, whose biographical notice he furnished but a few months prior to his death, for *Gross' American Medical Biography*, just issued.

### AS A TEACHER.

And now fairly began that life of labor and love conspicuous to the end of Dr. Francis's career. A graceful, though not eloquent talker, clear and cogent in his teachings, and free in his diverging utterances to catch up happy and remote conceits, he became a pleasing and popular lecturer. His whole soul was in his work. Between lecturing, visiting patients, and writing for medical quarterlies, he was kept incessantly busy; for at this time, besides his professorial duties, he was co-editor with Hosack, of the *American Medical and Philosophical Register*, founded by them in 1820, and attending to the largest practice then in the city. The receipts from his profession were for many years $15,000; and considering the fact that at the time he commenced practice the population of New York was but 68,000 souls, it may well be compared even with the apochryphal sums of more modern days. He taxed his energies beyond their strength. His friends advised him to visit Europe. He went to Europe, undermined by toil and disease, and with the enthusiasm of his profession, went hunting after the medical celebrities of the Old World. He became acquainted with Abernethy, Brewster, and Sir Astley Cooper. For

literary men his penchant showed itself thus early. He saw and conversed with Byron, whose passionate verses and lyrical revelations of a dark, gloomy, and restless life were the theme of every tongue. To Sir Walter Scott, the mighty magician of romance, he was introduced, and he has since written a charming account of his visit to the Scottish bard and novelist. His pen while abroad was not unemployed, as during his stay he wrote several articles for Rees's Cyclopædia, those on New York and Rush being the most memorable. These articles contributed greatly to the literary and professional reputation of Dr. Francis, and perhaps were the seal required to convince the skeptical of his great natural and acquired powers, for at that period none read an American book or believed in anything indigenous.

After extended travels in Europe, with visits to its most remarkable places, acquaintanceship with its renowned men, he returned to this country, bringing with him renewed health, a fund of anecdote, reminiscence and valuable knowledge, most remarkable and unfailing. Those only who have enjoyed the delicious privilege of the unrestrained communications of personal friendship can fully recognize the benefits acquired by this transatlantic experience.

Any narrowness of mind, so natural to one ignorant of all save the peculiarities of a provincial town, any petty conceit of home and its various productions, or even more snobbish idea that for all excellence we must look abroad—that none originated in our own country and nation—did any such feeling exist in the mind of Dr. Francis, ever after there was no evidence of it. Catholic, comprehensive, discriminating and honest, with him the mind had no country, and literature and science were cosmopolitan. Before their possessors he bowed himself in deep respect, while the mere holder of sordid wealth, especially if ignobly gained, penuriously hoarded or profligately spent, he passed with the least possible recognition of their existence. As the poet Tuckerman has stated in his beautiful obituary, "For genius and worth he reserved his best sympathy, caring nothing for luxury, show or riches. The society of an intellectual friend, the comfort of domestic love, the acquisition of a memorial of genius, the advancement of a patriotic, charitable, scientific, or literary cause, were to him the great charm and privilege of life."

Upon the return of the young traveler to New York with many choice works, the foundation of his now renowned library, he was appointed Professor of the Institutes of Medicine in the College of Physicians and Surgeons, and in 1817, on the resignation of Dr. Stringham, he also succeeded to the department of Medical Jurisprudence. Two years later, in addition to his former duties, he also became Pro-

fessor of Obstetrics, and filled this post till 1826, when he resigned, with his colleagues, Drs. Hosack, Mott, McNevin and Mitchell. A majority of the faculty organized a new school, called the Rutger's Medical College, in which Dr. F. held the chair of Obstetrics and Forensic Medicine. The classes were large and the success of the school most satisfactory, but in consequence of discussions and quarrels with the rival school, in which it is not necessary here to enter, by legislative enactment the school was dissolved, after a successful career of four years. With this ended Dr. Francis's twenty years' labors as a public teacher.

AS A MEDICAL WRITER.

His career as a writer was, however, far from finished, and, except in a professional way, but scarce begun. Up to this period the following list enumerates the most labored and enduring of his writings: Articles in different medical periodicals on obstetrics, vitriolic emetics in the membranous stage of croup, *Sanguinaria Canadensis*, Iodine, the goitre of Western New York and Canada, on medical jurisprudence, yellow fever, death by lightning, caries of the jaws of children, elaterium, ovarian disease &c.; he has published an essay on the "Use of Mercury," (8vo, New York, 1811;) "Cases of Morbid Anatomy," (4to, 1814;) "Febrile Contagion," (8vo, 1816;) "Notice of Thomas Eddy the Philanthropist," (12mo, 1823;) "Denman's Practice of Midwifery, with Notes," (8vo, 1825;) "Address before the New York Horticultural Society," (1830;) "Address before the Phillolexian Society," (1831;) "Letter on Cholera Asphyxia in 1832," (8vo, 1832;) "Observation on the Mineral Waters of Avon," (1834.)

Of these, the doctor himself thought most highly of those on vitriolic emetics in croup, an original and successful practice on his part; those on croton oil, elaterium and iodine, which he introduced to the American community; and that dated London, 1816, in which he first noted the rare susceptibility of the human constitution to a second attack of pestilential yellow fever; but among the profession his erudite labors in editing the Midwifery of Denman, far behind the present knowledge in this branch as it is in some respects, yet is in itself so marked in its advance upon previous knowledge, and so greatly increased in value by the expansive intellect of its American annotator, that it is very properly rebaptized Francis's Denman, and will long remain an enduring monument of the professional zeal, acumen, research and industry of its editor.

Released from the mill-horse routine of professional duties, the doctor found time for the more congenial employment of the leisure which could be enjoyed in the intervals of an ever large professional

business. Not, like most men, relying upon a local, family practice, Dr. F's clients were the men of all climes and places, who, sojourning in the city, suddenly taken ill, sent for the physician whose fame had penetrated into the remote quarters whence they came. He delivered numerous addresses before societies of all descriptions; among them, on Anatomy of Drunkenness, a Discourse before the New York Lyceum of Natural History, (1841.)

In 1846, Dr. Francis united with Drs. Mott and Stearns in forming the N. Y. Academy of Medicine. Owing to the existence of numerous cliques among the members of the profession, the first president was selected from among those who were aloof from all such organizations; and accordingly, Dr. John Stearns, the discoverer of the parturient virtues of ergot, a comparatively recent resident, a man of considerable legislative ability, and the oldest practitioner in the city, was elected to fill this high office and inaugurate the career of the Academy, and his term expiring by limitation, Dr. Francis, in 1847, was elected the second President of the Academy, and again at a subsequent period, when eligible by statute, was re-elected. He delivered several addresses before this body, (1847–8–9,) but his anniversary oration, the first of a series, since annually delivered by various members of the Academy, did much, by historic reminiscences and high-toned character, to elevate the Academy to the important position it has held in this community and the country. Delivered in the old Tabernacle—now itself become historical—the building, large as it was, could admit but a small portion of the crowds that were attracted by the fame of the speaker. It was estimated that 10,000 came to listen, while the building held but 3,000 when completely full.

The pursuits of his early days were not forgotten, and in recognition, he delivered addresses replete with historical associations before the Typographical Society of New York "On Dr. Franklin," (1850,) and "On the Publishers, Printers, and Editors of New York," (1859.)

The most elaborate of his historical recollections formed the subject of a double lecture before the New York Historical Society, (1858,) on "Old New York, or Reminiscences of the last Sixty Years." This was one of the happiest of his literary productions; rich in reminiscence, minute in detail, humorous, quaint and genial, redolent with kind feeling, and pervaded throughout with the characteristic *bonhomie* of the doctor, it will undoubtedly remain the most enduring of the productions of its erudite author.

A memoir of an eccentric New Yorker, of some ability, descriptive of Old New York, its appearance, and some of its most noted inhabitants, some discourses at Bellevue Hospital, (of the Medical Board of

which he was President ever since its present organization, and to which he was elected Honorary President when upon his death-bed,) and some later memoirs of his old associates, Drs. McNevin and Mitchell, complete the long and honorable list of the literary achievements of the illustrious deceased.

HONORS.

These various labors were not without recognition from the world. Besides those already alluded to, he had the high and rarely accorded honor of being chosen Foreign Associate of the Royal Medico-Chirurgical Society of London, and with De Witt Clinton, member of the Wernerian Society of Edinburgh, and other scientific associations abroad. In 1850 he received the degree of LL.D. from Trinity College, Hartford, Connecticut; and in 1860 this honor was duplicated by his much esteemed Alma Mater, Columbia College, of this city. This distinction, so charily bestowed by Columbia, was feelingly welcomed by the recipient, who reflected back the honor conferred upon him; yet still the duplex doctor continued to distribute his immemorial triplex pills. He was, from its foundation, president, and most actively engaged in promoting by every means in his power the noblest of modern charities, the Woman's Hospital of this city; and a week before his death he was elected president of the State Inebriate Asylum, at Binghamton. It is believed he had in a state of advanced preparation the addresses to be delivered at the laying of the corner-stone of the one, and the celebration of the completion of the other. It is to be hoped that these papers will not be lost; and I will suggest as a fitting compliment to the memory of the departed, that if such addresses exist, they be read by the highly educated and talented sons of him whose spirit will be with them on those eventful days.

We have thus rapidly sketched the principal public literary incidents in Dr. Francis's career. A few other more personal events are to be noted. In 1829, he was married to Miss Maria Eliza Cutler, a union which not only united him with a family of extended reputation, wide connection, and ample means, but which in itself was all that could be attained by mortals below. Those who are favored by the personal acquaintance with his bereaved widow well know how intimate was that union, how perfect was the assimilation of soul, and how entirely the life of the one was blended into that of the other. That Dr. Francis achieved all that he did, is in no small degree owing to the opportunity afforded for the expansion of his genius, by the freedom from domestic cares, by the methodical disposition of household matters, by the relief from many of the annoyances, petty vexations and harassing disturbances incident to the life of a practicing

physician. She it was who attended to the innumerable callers desirous of the doctor's signature to petitions, influence with parties, or mere loungers, aiming only to pass off their vacant hours agreeably. She received his professional calls, arranged his numerous consultations, remembered the ages of the children in his practice, provided virus, and saw that they were duly vaccinated. She attended to the nightly calls, thus preventing the exposure which, to the doctor, was so apt to be followed by most serious laryngitis. I have necessarily alluded to these facts, because to them the doctor owed so much of the time which he used to such good purpose, and because it seemed due to pay a passing tribute to the exemplary, devoted, genial, beloved woman, the pattern doctor's wife.

Three sons were the fruit of this happy union; boys that any parent might proudly claim as Cornelian jewels. One, alas! has preceded his father to the unknown world—taken away in the prime of life, in the first flush of earthly honors undoubtedly within his reach, conspicuous for unusual talents, unwonted attainments, kindly heart, and manly beauty; the cold tomb has early received this extraordinary promise, and the father and son are now reunited.

AS A PUBLIC BENEFACTOR.

Thus far we have performed but the easy task of cataloguing the perfected results of a life of threescore years and ten, in little more than a single point of view, and that a literary one. In this *résumé* no mention has been made of the ever-ready assistance rendered to the writers, historians, and orators of the time, many of whose sonorous periods have been pointed by his assistance, and their value enhanced and truthfulness authenticated by his retentive memory; were these recognized, pages and chapters from many a noble work would pass to his credit.

The labors in other directions, the encouragement by thought, personal attention, and personal influence, which have stimulated others in like situations, and which have resulted in glorious fruitions, their record is to be found in the existence of many noble and beneficial institutions. Not referring to the N. Y. Academy of Medicine, the Binghamton Inebriate Asylum, or the Woman's Hospital, already alluded to, we can see their fruits in the Historical Society, in which he officiated in its early days as librarian and general director, whose ornate library building attests his energy, enriched as it is by treasures of almost antediluvian antiquity, obtained in consequence of his untiring zeal and persistent entreaty.

Large as is this enumeration, multitudinous and comprehensive as

are the details, we feel that it all together conveys but a poor idea of the mental powers of the man; and even when it is recognized that for very many years his daily sleep was only from two to four hours at the most, can we appreciate the indefatigable industry which enabled him to compass so much.

MENTAL ANALYSIS.

The faculty of industry, however, is a more common and less conspicuous gift than memory. This was, if not the pre-eminent, certainly the most astonishing characteristic of the venerable deceased. Observation must have been almost as well marked among the cranial developments; for had he not noted the pimple upon the right ala of the nose, the scar on the left ear, or the want of a fifth brass button on one side of a green coat, as narrated by Dr. Sims—had he not noticed these trifling peculiarities, how could he have recalled them twenty, and even forty years afterwards? Indeed, he has stated that he was oppressed by the minutiæ of his remembrance, and that forgetfulness would sometimes have been welcomed.

"Through the shadowy past,
Like a tomb searcher, memory ran;
Lifting each shroud that time had cast
O'er buried hopes."

The readers of his varied works, and far more those who enjoyed his society, will ever remember the daguerreotype clearness with which he painted the portraits of the men of past times and bygone days.

Nor was it solely forms and events that his tenacious memory held in its iron grasp; places and dates precise to the minute, and the exact sequence of long-past actions—so many wonderful examples of this priceless gift are on record and in remembrance, that it is unnecessary to record them here. Is was to this marvelous faculty that he owed much of his greatness. He never forgot the pages of science or poetry, the remarks of sages and philosophers; the appearance of objects were impressed upon his memory, and stood out as plainly after years had rolled by, as do the tracks of birds, and the anatomical characteristics of the fern-leaf in the now everlasting rocks of the mountain. It was to this faculty that he owed the power of interesting, often instructing, even the most erudite in their own special branch of knowledge, by reference to the works of writers of past days, who, superseded by newer lights, had, with all their richness of detail, been thrust aside for newer gods.

To industry and memory add enthusiasm—perhaps the key to the former, and the assistant of the latter—certainly that which made the

orator, the warm friend, the genial companion. "Whatever his head found to do, he did with his might:" was it the simple greeting of a friend, or a distinguished stranger; was it the advocacy of a political opinion, the arrest of a murderous swill-milk traffic, a discussion on the communicability of yellow fever, or the erection of a charity, Dr. Francis's whole soul was enlisted, and he stopped not at any obstacle. How his energetic greeting has cheered the heart of many a desponding doctor, fainting by the wayside, weary of the long days preceding tardy success! "My dear doctor," he would say, "don't despair, there is a great deal in you. Take care of your precious health; that last production of yours has crowned you with immortal honor; you will be remembered when poor Dr. Francis is under the sod. Go on, my dear doctor; I see all you do, and what you can and will effect." How cheering fell these gracious words upon the desponding ear! How many, while well knowing that there was a certain amount of exaggeration in these encouraging remarks, yet in his heart hoped, perhaps believed, that they were not all exaggeration! and that half-thought, that hope, was a cordial to his disappointed soul. The reflection that the clear-sighted, the renowned Dr. Francis had uttered such like words as these—why, one could almost point to the very flagstone where he once stood, and, sunning in his presence, drank in his honeyed words.

It was the enthusiasm flowing from his freshness of heart that belied his venerable looks. He was thus ever young; never too old to learn; never too old to teach; never too old to enter heart and soul, body and mind, laboriously and pecuniarily into any scheme for advancing the great interests of humanity, the good of his country, or the service of an individual.

"He had a genuine public spirit, such as distinguished our early race of statesmen; he loved his country, he loved knowledge, he loved eminent men—his native city, institutions, characters and places—with the ardent feelings of an enthusiast, and the loyalty of a faithful citizen. It was this going out of a limited personal sphere—this identification of himself with what he admired and loved, that kept him morally alive to the last, and endeared him to so many friends of widely different stations and pursuits. While men of letters sought encouragement in their lonely and often profitless toils from his active beneficence and warm praise, the ignorant and the poor blessed him as a kind healer of their infirmities. In our age of material prosperity and self-absorption, this generous and genial type of character has become rare."—[TUCKERMAN.]

AT HOME.

If thus, in his public career, he appeared to be every inch a man, his true place was in his own house; in the old, long-to-be-remembered residence, whose solid walls, which had witnessed so much joy, and alas! in the death of his son, so profound a grief—which had welcomed the greatest of modern rulers, the orators, statesmen, poets, professional men of all grades, lands and tongues, the fairest of earth's creatures, poetesses, sculptors, painters, sages, mere antiquaries, delving and collaborating historians, the great, and those to be renowned. Here the doctor was himself—acting upon the spur of the moment, speaking the words which the occasion suggested; now to a blooming miss, anon to an academician, to an astronomer, a conchologist, a foreign traveler, the discoverer of the North Pole; he advanced no theme which he could not discuss understandingly and elaborately—his mind, like a diamond from its numerous facets, showered streams of glowing, prismatic light, refracted and gorgeous, illuminating and developing. However erratic and wandering in his discourse, in home conversations, or in the discussions of learned assemblies, he was ever luminous and interesting, like those divergent rockets, called "chasers" by the boys, which, though uncertain in their aim, and tortuous in their course, still flashing, carry the beams of new light into regions before darkened and obscure.

Here was a home indeed. No matter whether at the dearly cherished No. 1 Bond Street, in past days a residence considered almost palatial, and, with its associates, the end of a walk to see the glories of New York architecture—or in the more modern structure of brown stone, with its plate glass, in 16th Street—the place was little; the home consisted in that cherished circle, into which came no bickerings, no heartburnings, no envies—the translation from this to a world on high could scarcely seem abrupt.

In his interior character, Dr. Francis was eminently lovely. Frequent inflammation of the larynx had given his voice a raucous tone, yet his kindly manner, and his warm smile of greeting, soon allayed the fears of children alarmed at his portly figure and his long gray hair, and clothes cut in the style of the fathers.

POLITICAL AND RELIGIOUS SENTIMENTS.

In regard to the great questions of the day, the doctor held strong conservative opinions. An old Whig of the Clay and Webster school, having no political ends to subserve, he saw no necessity for changing his views; but to the last opposed to the agrarian democratic views as developed by Cobb and Floyd, he saw daily new reasons for the

propriety of his actions in opposing the election of judges by ballot, in advocating a protective tariff, and the like. At the last Presidential election, fearing the results which have come upon our nation, he voted for the party ostensibly the Union party—Bell and Everett.

In religious matters, in the conflict of views, he was, till within a few years, unsettled in his opinion respecting tenets and dogmas. Possessing among his friends clergymen of all denominations, recognizing in all devotional feeling and true religious actions, yet so divergent in their doctrinal views, the great problem of man's present and future being was inexplicable. "I don't comprehend it," he said once to me, "but it is clear enough to others; my cook and that chimney-sweep understand it; they have no doubts, no misgivings." But the later years of his life were marked with more religious serenity, and he accepted in faith the fundamental doctrines of Christ. This uncertainty made him tolerant of the opinions of others; and while he could listen like a philosopher to the fanatical confidences of Genet, he opened the lecture-room of the College of Physicians and Surgeons in Barclay Street to the first Unitarian sermon ever preached in New York, by the pure-minded Channing, when intolerant bigotry had denied to this then feeble denomination every hall in the city.

### HIS GENERAL HEALTH.

During the long-protracted life of Dr. Francis, he enjoyed unusual health and vigor; although he had had yellow fever and small-pox, and during his illness with the former he was comforted by the sight of his coffin, brought in to facilitate his removal; till, in the year 1823, he had a serious attack of laryngitis. He had been, prior to this first attack, unusually robust; and, naturally sanguineous, this disease assumed a most acute inflammatory type. Educated in the old-school doctrines, he practiced upon himself the views he had taught, and so earnestly defended ever afterwards, and during this illness had taken from his own arm a quantity of blood which has ever since been quoted as the most ultra carrying out of the depletory doctrine to a successful termination. On the 17th November, venesection to ℥xl.; evening, ℥xx. 18th Nov., ℥xvj.; evening, ℥xvj. 19th Nov., ℥xvj.; evening, ℥xvj. 20th Nov., ℥xvj. 22d Nov., ℥xij. Total, ℥clij. Three or four days after, being still in a precarious condition, venesection was again repeated. Numerous less serious attacks occurred afterwards, and for which he bled himself more than one hundred and fifty times. The first great shock to his system was in consequence of the loss of his eldest son, before alluded to, from which sad dispensation he never fully recovered. His nervous system was again greatly disturbed by the excitement in-

cident to the removal from Bond Street, where he had lived so long, to a more suitable residence, away from the turmoil of business, the noisy street, and the attendant dust and smoke filled air. For many weeks sleep seemed departed from his pillow, and in the week's seven days he slept little more than as many hours.

LAST ILLNESS.

From this, however, he seemed to have quite recovered; for, when fairly settled in Sixteenth Street, cheerfulness, appetite, and vigor returned, and he again entered upon his usual life of activity and beneficence. Early in December last, he was seized with an ominous carbuncle upon his back, in the dorsal region, which attained to the magnitude of six inches in circumference; and when this had reached its maximum, a more huge one still made its appearance in the lumbar region, which swelled to the enormous dimensions of nine by seven inches. Coincidently, numerous smaller ones, from the size of a nut to that of a hen's egg, appeared around. Such a mass of carbuncular disease never fell under the notice of his experienced attendants, Drs. R. H. Kissam and Valentine Mott.

While this disease progressed, an aphthous affection of the mouth, throat, fauces, and the entire mucous membrane, as far as the eye could reach, so disturbed his powers of eating, digestion, and assimilation, that starvation seemed imminent; but after some two weeks' continuance this unpleasant symptom disappeared, and with the return of a good appetite and the assimilation of nutritious food, it was hoped that he would be able to support the reparative process now going on in the diseased parts. But while the hopes seemed about to be crowned by a successful issue, an abscess appeared in the popliteal space, and extended well up the posterior face of the thigh. After some days this was opened, and a large quantity of healthy pus withdrawn, with apparent relief. This additional drain upon his system was, however, too much for his constitution to sustain, and for several days before his final departure he had frequent attacks of exhaustion, and nature was evidently sinking, till, in the course of the night of Thursday, it was apparent that he could not long survive. Serene and calm, as he had been during his whole illness, he expressed his entire resignation to the will of God, and met this trying hour with composure. Seeing his family gathered around his bedside, he said, "It is a very solemn thing to see you all around me—how characteristic of an exit!" Shortly after, turning to his dear friend and attentive physician, Dr. Kissam, he said, "God bless you! Blessed be God! Blessed be Jesus Christ!" He then asked if he could turn over, and

immediately after being assisted to do this, he said, "I'm gone! I'm dead!" These were his last words, for in less than three minutes from this time, at the close of nine weeks of great suffering, at a few minutes before three o'clock of Friday morning, February 8th, Dr. John W. Francis calmly, and without a struggle, entered the unknown world.

—— like a time-worn clock,
His weary wheels of life at last stood still.

Dr. Francis was essentially a representative man. Many looked upon him as a type of the Knickerbocker settlers of New Amsterdam, with whom it is seen he had no affinity; yet still his short, thick-set frame, which weighed about one hundred and ninety pounds, his straight-bodied coat and vest, his white neckerchief, broad-brimmed hat, inseparable cane, and gold spectacles, made a unity in look which fancy associates to the early Dutch settlers. This pleasant figure will be henceforward missed from our streets. To the medical profession his loss is irreparable. Among our silent members his ever-ready utterance, his quaint ideas and historical reminiscences, his polysyllabic, Johnsonian language, will no more be heard. He who was ever ready to say kind words of others now needs others to speak for him. To the literary world his departure will be mourned. No needy writer ever failed to get his subscription and his influential name to his list; and if among the choice works which compose the large library he has left behind there be found a few deserving to be called trash, be assured that his head did not select if his heart paid for them. It would be curious to know the number of books and pamphlets dedicated to him! They must exceed a hundred in number, of all characters and descriptions; books of prose and poetry, on medicine and other sciences, pamphlets, and sheets of music. Within a year, one day's issue of the ever-teeming press brought three inscribed to him in words of admiration and affection.

Finally, the poor will sadly miss him. It has been well said, "that beneath a lively and off-hand address" he kept a heart "open as day to melting charity." His purse was never closed to the needy even in seeming, while his professional toils were freely given to soldiers who had battled for their country's honor; artists who had perhaps once been something, or belonged to the professions of Cooke, Siddons, Garcia, Dr. Begnis, Malibran, Sontag, or Grisi, whom he so much loved to see and hear; to the clergy of all denominations, to the sons of the sons of an old friend, or to a favorite household servant—these he attended, in larger numbers than any other professional man that I know, with a fidelity unsurpassed by that accorded to the wealthy and

those in high positions, and whose tears of gratitude dropped upon his bier was all the return he received in this world.

And what is the result we arrive at by this contemplation? We see on the one hand incessant devotion to duty, persistent toil, a kindly heart, a generous hand; and on the other a quiet mind, honor, the love of one's fellows, the tears of the poor, the gates of heaven.

> Can that man be dead
> Whose spiritual influence is on his kind?
> He lives in glory; and his speaking dust
> Has more of life than half its breathing moulds.

## EDITORIAL AND MISCELLANEOUS.

*Medical Society of the State of New York.*—The fifty-fourth anniversary of this Society was held at Albany, on the 5th, 6th, and 7th of February. The attendance was unusually large, and the proceedings more than ordinarily interesting. The number of papers and reports read was greater than at any previous meeting. We shall have occasion to refer to them more in detail when they appear in printed form as one of the State documents. We are limited at this time to the titles of the papers.

The President, in view of the increasing activity of the Society, recommended in his inaugural a divison into two sections—one medical, and the other surgical; the meetings of the sections to be held in the afternoons and evenings, the ordinary routine business of the Society to be transacted during its morning sessions.

The appearance of two delegates from the Connecticut Medical Society, who were invited by resolution to take part in the deliberations of the Society, was, we trust, but the commencement of a more extended interchange of courtesies. The precedent inaugurated by the Connecticut Society was immediately responded to by our own State Society, in the appointment of eight delegates to attend the next meeting of the Connecticut State Medical Society.

The subject of the establishment of a State Commission of Lunacy was brought before the Society, by Dr. L. B. Coates, and a series of resolutions was presented, endorsing a bill before the State Legislature, and appointing a committee of the Society to confer with the Senate committee, and urge the passage of the bill. Dr. J. McNulty suggested that the committee should examine the bill and report to the Society such alterations and amendments as they might deem advisable.

The committee, after having examined the bill, reported on the following day some modifications. Dr. M. H. Ranney, of New York, addressed the Society upon the subject, objecting to the whole bill, and calling the special attention of the Society to many points which he considered highly objectionable. At the close of his remarks, Dr. Ranney submitted a bill to the consideration of the members, which, upon motion of Dr. Sayre, was referred to the committee, with instructions to transmit the same to the Legislature, as the expression of the State Medical Society.

The report of the Committee on Medical Education, to whom was referred that portion of Dr. Brinsmade's inaugural address which related to the conferring of second degrees, was adverse to the suggestion. The report urged greater requirements for the degree as it at present exists, and suggested, "that all commencing the study of medicine should prove, by an examination, that they possess at least the basis of a good English education; a sufficient knowledge of the sciences to enable them to comprehend the principles of their application in anatomy, physiology, and therapeutics; and such a knowledge of the ancient and foreign languages as is essential to aid them in their studies, and enable them to comprehend a prescription when written in Latin." In addition, the report recommended that the term of lectures should continue throughout the year, with short vacations, and that there should be only four a day, with hospital attendance and daily examination, the final examination to be conducted by a Board of Examiners, appointed by the State Societies, or the American Medical Association. The report was ordered to be forwarded to the next meeting of the American Medical Association, as an expression of the sentiments of the Society.

Dr. E. Harris read an elaborate report of the Committee on the Hydrography of the State of New York, closing with a series of resolutions, calling upon the State Legislature to take efficient action in providing for "a comprehensive and effectual system of inquiry and sanitary advice and control, for the promotion of the public health."

Dr. E. H. Parker, the Vice-President, made some remarks upon the extensive use of opium by the community as a stimulant; and in view of the calamitous results, he urged that the Legislature should be memorialized to forbid its sale under certain restrictions, and presented a series of resolutions to that effect, which were adopted.

A large number of papers was presented, some of which were read, while others were referred unread to the Committee on Publication.

Of those read, were the following papers: On the Use of Mercurials in Acute Pericarditis, by Dr. S. O. Vanderpool, of Albany; A

Case of Suspended Animation, by Dr. T. G. Thomas, of New York; A Case of complete Inversion of the Uterus, by Dr. Van Dyck, which elicited a lengthy discussion; Dr. C. A. Lee occupying a large portion of one of the sittings of the Society in a consideration of the subject.

Another lengthy discussion followed the reading of a paper on Simple Extension in the Fracture of Long Bones, by Dr. John Swinburne, of Albany. Then followed a paper on Endermic Medication, by Dr. Bissell, of Utica; Report of the Committee on the Adulteration of Drugs, by Dr. Squibb; A Case of Poisoning by Corrosive Sublimate, by Dr. Downs; A Case of Suicide by wounding a small Branch of the Superior Thyroid Artery, by Dr. Finnell, of New York; On Compound Comminuted and Complicated Fracture of the Upper End of the Tibia, by Dr. Alden March, of Albany; On the Statistics of Suicides in New York City for 1859 and 1860, by Dr. J. G. Adams, of New York; On the Tetanic Diathesis, by Dr. J. McNulty, of New York; On Exsection of Portions of the Eighth, Ninth, and Tenth Dorsal Vertebræ, by Dr. Hutchinson, of Brooklyn; On Amputation of the Lower Extremities with reference to Artificial Substitutes, by Dr. Douglas Bly; On Amputation of the Cervix Uteri, and on the Value of Chromic Acid as a Caustic Application to the Os Uteri, by Dr. J. M. Sims; On Sub-Peritoneo-Pelvic Pregnancy, by Dr. Skilton.

Among the papers not read, but referred to the Committee on Publication, were the following: Two Pair of Twins within One Year and Five Days, by Dr. Barrows; Suspected Poison, by Dr. J. G. Orton; Bleeding in Cerebral Disease, by Dr. S. O. Vanderpool; Rupture of the Uterus, with an Account of Three Cases, by Dr. G. J. Fisher; Diphtheria, by Dr. Ferris Jacobs; History of the Madison County Medical Society, by Dr. A. L. Sanders; Diphtheria, by Dr. U. Potter; Rupture of the Womb, complicated with Strangulated Umbilical Hernia in a State of Gangrene, by Dr. C. V. Barnet; Memoir of Dr. C. Van Wie Burton, by Dr. S. D. Willard; Report of Committee on Statistics, by Dr. Orton; Reduction of Dislocation of the Femur, by Dr. Swinburne; Case of Fibrous Tumor of the Uterus, by Dr. Dayton; Bony Tumor within the Uterus, by Dr. N. C. Husted; and Memorial from the Monroe County Medical Society.

The Session closed with the election of officers and the address of the President. The officers chosen for 1862 were:

Dr. E. H. PARKER, of Poughkeepsie..*President.*
" A. VAN DYCK, of Oswego.....*Vice-President.*
" S. D. MILLARD, of Albany .....*Secretary.*
" J. V. D. QUACKENBUSH, of Albany. *Treasurer.*